ENVIRONMENTAL IMPACT REPORT
Amargosa Road and Palmetto Way Industrial Warehouse Building

City of Hesperia, California

State Clearinghouse Number: **2025090664**

Prepared for:
CITY OF HESPERIA PLANNING DEPARTMENT
City of Hesperia
9700 Seventh Avenue
Hesperia, CA 92345
Contact: Edgar Gonzalez, Senior Planner
egonzalez@hesperiaca.gov

Prepared by:
CASC ENGINEERING & CONSULTILNG, INC.
1470 E. Cooley Drive
Colton, CA 92324
Contact: Frank Coyle, Director of Planning
fcoyle@cascinc.com

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CASC Engineering and Consulting

ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius (Centigrade)
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACP	Alternative Compliance Plan
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
ADU	accessory dwelling unit
AFB	Air Force Base
AFY	acre-feet per year
AG	Agriculture
AIA	Airport Influence Area
AIC	Archaeological Information Center
AICUZ	Air Installation Compatibility Use Zone
ALUC	Airport Land Use Commission
APCD	Air Pollution Control District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
ARB	California Air Resources Board
AST	aboveground storage tank
ATCM	Airborne Toxic Control Measures
BAU	business-as-usual
BCF	billion cubic feet
BERD	California Built Environment Resource Directory
BIOS 5	Biogeographic Information and Observation System
BLM	Bureau of Land Management
BMP	Best Management Practice
BTU	British Thermal Unit
BVOC	biogenic volatile organic compound
C-1/C-P	General Commercial
C^{2}ES	Center for Climate and Energy Solutions

CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Occupational Safety and Health Administration
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CBC	California Building Standards Code
CCR	California Code of Regulations
CDC	Center for Disease control and Prevention
CDF	California Department of Finance
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CH_4	methane
CHBC	California Historic Building Code
CHL	California Historical Landmarks List
CHP	California Highway Patrol
CHWMP	County Hazardous Waste Management Plan
CMP	Congestion Management Plan
CMS	Congestion Management System
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNPSEI	California Native Plant Society Electronic Inventory
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Connect SoCal	2020-2045 Regional Transportation Plan/Sustainable Communities Strategy
COP	Conference of Parties
CPHI	California Points of Historical Interest
C-P-S	Scenic Highway Commercial

CPUC	California Public Utilities Code
CRHR	California Register of Historical Resources
CSA	Community Service Area
CSD	Community Services District
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWPP	Community Wildfire Protection Plan
dB	decibel
dBA	A-weighted decibel
DBESP	Determination of Biologically Equivalent or Superior Preservation
DBH	diameter at breast height
DDT	dichlorodiphenyltrichloroethane
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DUC	Disadvantaged Unincorporated Communities
DWR	California Department of Water Resources
EIA	United States Energy Information Administration
EIC	Eastern Information Center
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EJC	Environmental Justice Community
ELAP	Elsinore Area Plan
EMS	Emergency Medical Services
EMWD	Eastern Municipal Water District
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
ERH	Emergency Ride Home
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
EV	electric vehicle
EVMWD	Elsinore Valley Municipal Water District
FAA	Federal Aviation Administration
FAR	floor area ratio
FCS	FirstCarbon Solutions
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map

Flood Control District	Riverside County Flood Control and Water Conservation District
FMMP	Farmland Mapping and Monitoring Program
FMWC	Farm Mutual Water Company
FTA	Federal Transportation Administration
GHG	greenhouse gas
GIS	Geographic Information System
GPA	General Plan Amendment
GWh	gigawatt-hour
GWh/y	gigawatt-hours per year
GWP	global warming potential
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
HCD	California Department of Housing and Community Development
HCDA	Housing and Community Development Act
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HMTA	Hazardous Materials Transportation Act
HOV/HOT	High Occupancy Vehicle/High Occupancy Toll
HRA	Health Risk Assessment
HRI	California Historical Resources Inventory
HUD	United States Department of Housing and Urban Development
HVAC	heating, ventilation, and air conditioning
HVIP	Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project
HWCL	Hazardous Waste Control Law
ICC	International Code Council
IOU	investor-owned utility
I-P	Industrial Park
iPaC	Information for Planning and Consultation
ISO	Independent System Operator
kWh	kilowatt-hour
LBP	lead-based paint
LBPPA	Lead-Based Paint Poisoning Prevention Act
LCFS	low carbon fuel standard
L_{dn}	day/night average sound level
LED	light-emitting diode
L_{eq}	equivalent sound level
LEUSD	Lake Elsinore Unified School District
LEV	Low Emission Vehicle
LID	Low Impact Development

L_{max}	maximum noise level
LOS	Level of Service
LRA	Local Responsibility Area
LSE	load-serving entities
LUST	Leaking Underground Storage Tank
M-SC	Manufacturing-Service Commercial
MARB/IPA	March Air Reserve Base/Inland Port Airport
MBTA	Migratory Bird Treaty Act
mgd	million gallons per day
MLD	Most Likely Descendant
MMI	Modified Mercalli Intensity
Mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resources Zone
MS4	Municipal Separate Storm Sewer System
MSHCP	Multiple Species Habitat Conservation Plan
MTBE	methyl tert-butyl ether
MTS	Metropolitan Transportation System
MU	Mixed Use
MUA	Mixed Use Area
MVAP	Mead Valley Area Plan
MWh	megawatt-hour
MXD	mixed-use development
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEHRP	National Earthquake Hazards Reduction Program
NAHC	Native American Heritage Commission
NAL	Numeric Action Level
NDC	nationally determined contributions
NEL	Numeric Effluent Limit
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
N_2O	nitrous oxide
NO_2	nitrogen dioxide

NOAA	National Marine Fisheries Service
NOC	Notice of Completion
NOP	Notice of Preparation
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTR	National Toxics Rule
O_3	ozone
OA	Operational Area
OEHHA	California Office of Environmental Health Hazard Assessment
ONAC	Office of Noise Abatement and Control
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OS-MIN	Open Space-Mineral Resource
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
ppb	parts per billion
pph	person per household
ppm	parts per million
PPV	peak particle velocity
PRPA	Paleontological Resources Preservation Act
PVC	polyvinyl chloride
R-A	Residential Agriculture
RCA	Riverside Conservation Authority
RCDWR	Riverside County Department of Waste Resources
RCFD	Riverside County Fire Department
RCIP	Riverside County Integrated Project
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RCTC	Riverside County Transportation Commission
RHNA	Regional Housing Needs Assessment
RivCoParks	Riverside County Regional Park and Open-Space District

RIVTAM	Riverside County Traffic Analysis
RMP	Risk Management Plan
ROG	reactive organic gases
RPS	Renewable Portfolio Standard
PRPA	Paleontological Resources Preservation Act
R-R	Rural Residential
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RVLUO	Rural Village Land Use Overlay
RWQCB	Regional Water Quality Control Board
RWRF	Regional Water Reclamation Facility
SARA	Superfund Amendments and Reauthorization Act
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCHWMA	Southern California Hazardous Waste Management Authority
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SKR HCP	Stephens' Kangaroo Rat Habitat Conservation Plan
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SMVAP	Sun City/Menifee Valley Area Plan
SO_2	sulfur dioxide
SoCAB	South Coast Air Basin
SoCalGas	Southern California Gas Company
SOON	Surplus Off-Road Opt-In for No_X
South Coast AQMD	South Coast Air Quality Management District
SQG	Small Quantity Generator
SR	State Route
SRA	State Responsibility Area
SRRRA	Santa Rosa Regional Resources Authority
State Water Board	California State Water Resources Control Board
SWFP	Solid Water Facility Permit
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminants
TAZ	Traffic Analysis Zone
TCM	Transportation Control Measure

TDM	Transportation Demand Management
TDR	Transfer of Development Rights
TDS	total dissolved solids
Tg	teragram
therms/y	therms per year
TIA	Transportation Impact Analysis
TMA	Transportation Management Association
TMDL	Total Maximum Daily Load
TOD	Transit Oriented Development
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
UMTA	Urban Mass Transit Administration
UNFCCC	United Nations Framework Convention on Climate Change
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
VdB	Velocity in Decibels
VIP	Voucher Incentive Program
VMT	Vehicle Miles Traveled
VOC	volatile organic compound
W-1	Watercourse, Watershed, and Conservation Areas
W-2-M	Controlled Development Area with Mobile Homes
WATERS	Watershed Assessment, Tracking, and Environmental Results System
WDR	Waste Discharge Requirement
WIMP	Wind Implementation Monitoring Program
WQMP	Water Quality Management Plan
WRF	Water Reclamation Facility
WRI	World Resources Institute

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SECTION 1: EXECUTIVE SUMMARY

1.1 - Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Amargosa Road and Palmetto Way Industrial Warehouse Building Project (State Clearinghouse Number (SCH) 2025090664). This document is prepared in conformance with CEQA (California Public Resources Code [PRC] § 21000, *et seq*.) and the CEQA Guidelines (California Code of Regulations [CCR] Title 14, § 15000, *et seq*.).

The purpose of this Draft EIR is to inform decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed Project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

1.2 - Project Summary

1.2.1 - Project Location

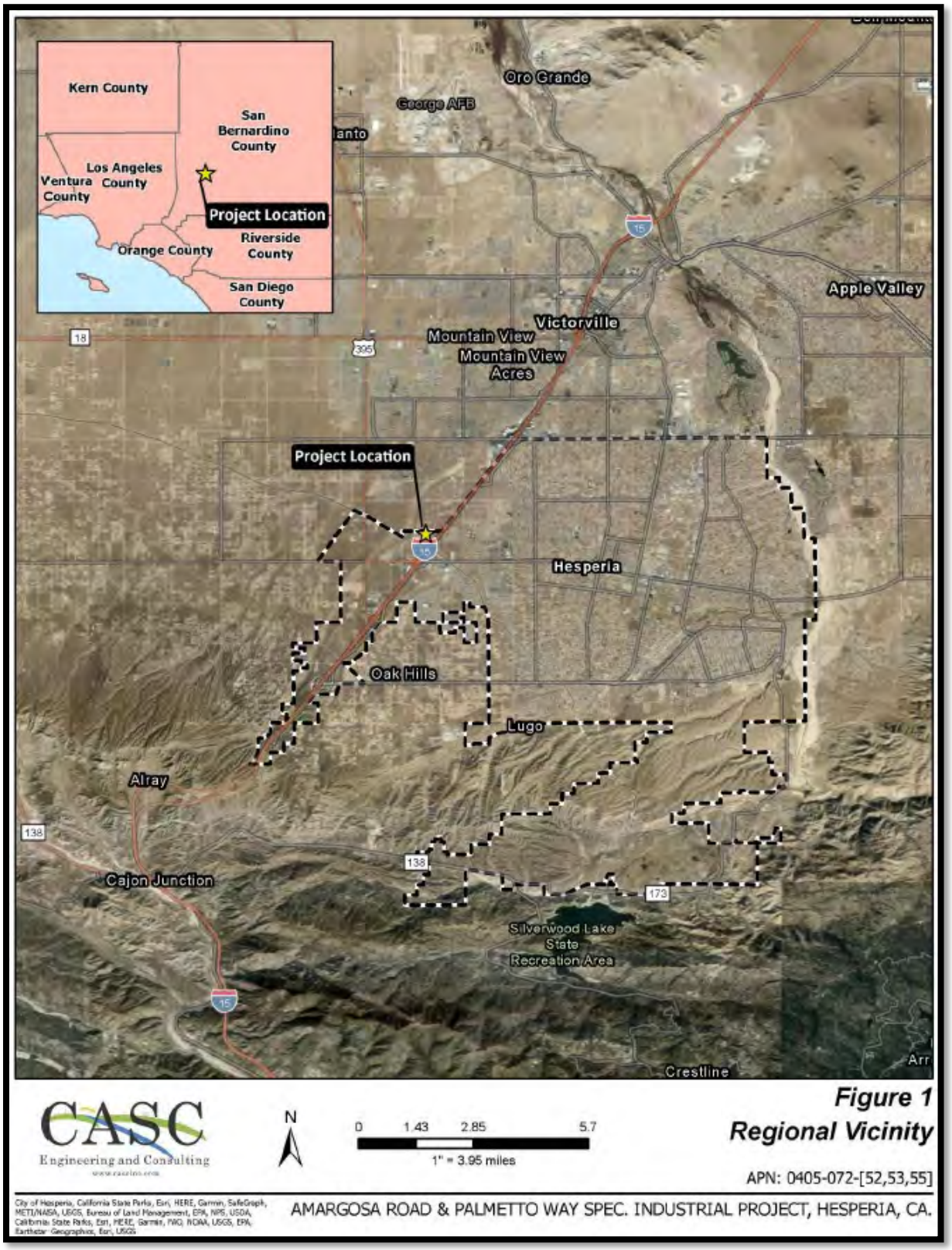
The Project site is recognized as Assessor's Parcel Numbers (APNs: 0405-072-52, 53, and 55) and is situated in the City of Hesperia ("City") within the southwestern portion of San Bernardino County within the High Desert region of Southern California. See *Figure 1 – Regional Vicinity*. The Project site is situated east of Interstate 15 (I-15) and is accessible via Amargosa Road and Avenal Street. The

Project site encompasses approximately 30.52 acres and consists of vacant land that is characterized by relatively level terrain and a mix of ruderal/disturbed vegetation and Joshua tree woodland. The site is bounded by Avenal Street to the north, Palmetto Way to the south, and Amargosa Road to the east. The Project site is located within Section 14, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map. See *Figure 2 - Aerial Imagery Map*.

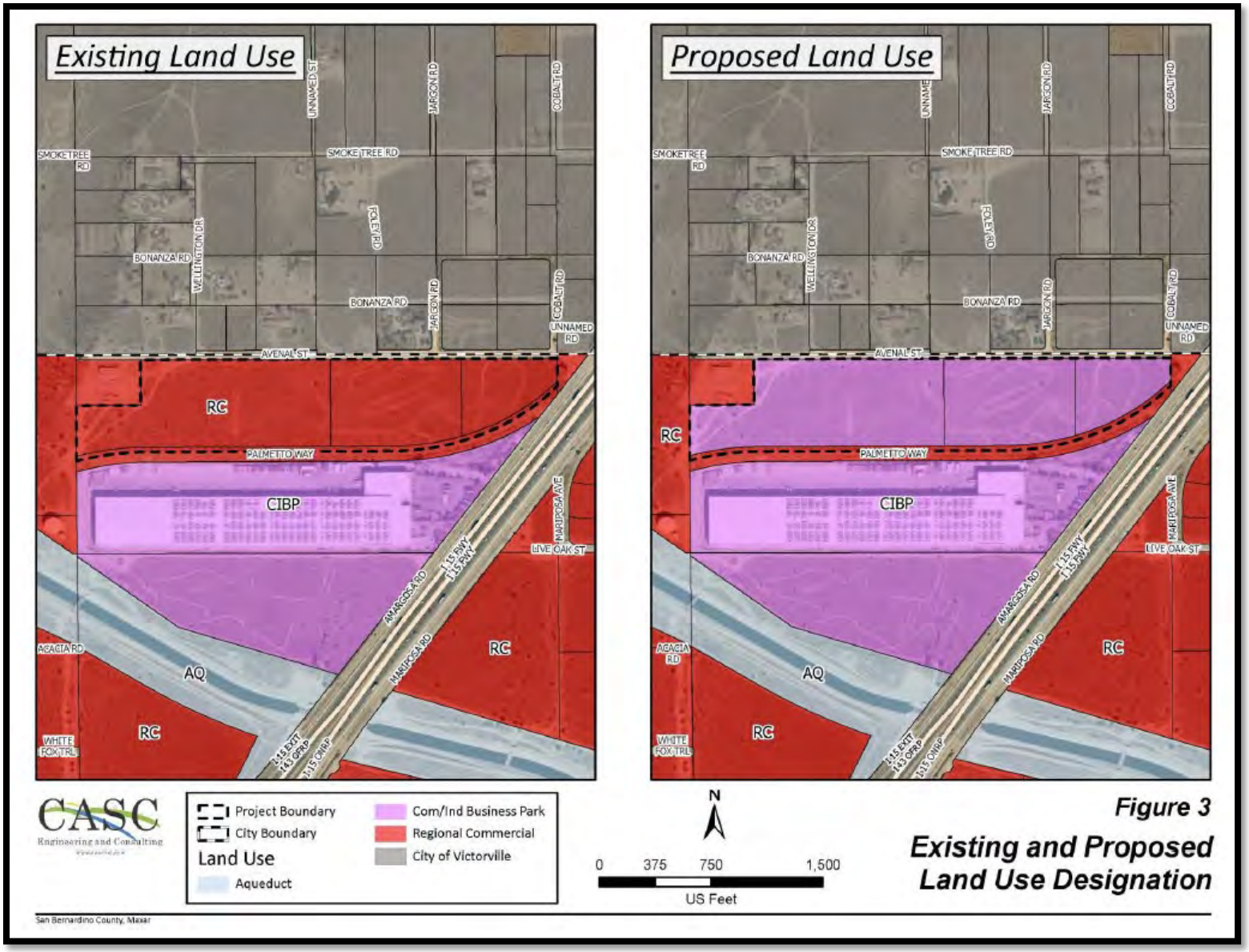
The Project site has an existing General Plan Land Use designation of Main Street and Freeway Corridor Specific Plan – Regional Commercial (RC) and a proposed General Plan Land Use Designation of Commercial/ Industrial Business Park (CIBP). See *Figure 3 – Existing and Proposed Land Use Designation* and *Figure 4 – Existing and Proposed Zoning*.

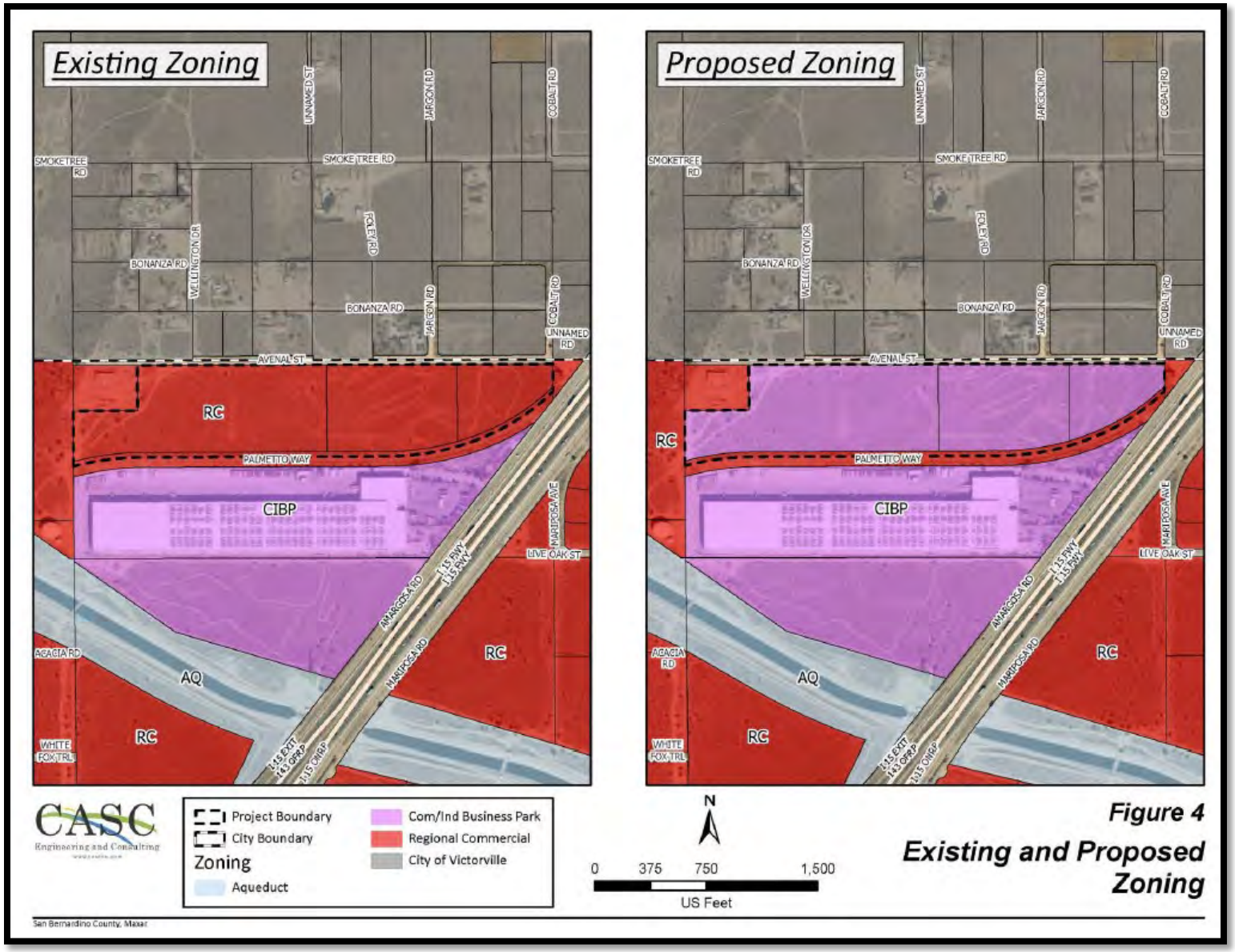
Surrounding land use designations and existing conditions are as follows:

- **North**: The City of Victorville is located to the north. Existing uses include residential development and vacant land.
- **South:** Designated Commercial Industrial Business Park (CIBP). Existing uses consist of a Distribution Warehouse.
- **East:** Designated as Regional Commercial (RC). Existing uses consist of a two sided billboard, Amargosa Road and I-15 Freeway.
- **West:** Designated as Regional Commercial (RC). Existing uses consist of a utility building and vacant land.


Kern County
San Bernardino County
Los Angeles County
Ventura County
Orange County
Riverside County
San Diego County
Project Location
Oro Grande
George AFB
Apple Valley
Victorville
Mountain View
Mountain View Acres
Project Location
Hesperia
Oak Hills
Lugo
Alray
Cajon Junction
Silverwood Lake State Recreation Area
Crestline
18
395
15
138
173
CASC
Engineering and Consulting
N
0 1.43 2.85 5.7
1" = 3.95 miles
Figure 1
Regional Vicinity
APN: 0405-072-[52,53,55]
City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Earthstar Geographics, Esri, USGS
AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.


Jargon Rd
Mojave St
Mojave St
Wellington Rd
Avenal St
Avenal St
040507255
040507252
040507253
Palmetto Way
Palmetto Way
Barstow Fwy
Live Oak
California Aqueduct
Amargosa Rd
Barstow Fwy
Mariposa Rd
143
Amargosa Rd
CASC
Engineering and Consulting
N
0 0.07 0.13 0.26
1" = 3.95 miles
Figure 2
Aerial Imagery Map
APN: 0405-072-[52,53,55]
AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.


Existing Land Use
Proposed Land Use
SMOKE TREE RD
BONANZA RD
AVENAL ST
PALMETTO WAY
LIVE OAK ST
AGAVE RD
WHITE FOX TRL
UNNAMED ST
JARGON RD
COBALT RD
UNNAMED RD
WELLINGTON DR
MARIPOSA AVE
AMARGOSA RD
I-15 FWY
I-15 EXIT
I-15 OFRP
I-15 ONRP
RC
CIBP
AQ
CASC
Engineering and Consulting
Project Boundary
City Boundary
Land Use
Aqueduct
Com/Ind Business Park
Regional Commercial
City of Victorville
N
0 375 750 1,500
US Feet
San Bernardino County, Maxar
Figure 3
Existing and Proposed
Land Use Designation


Existing Zoning
Proposed Zoning
SMOKETREE RD
SMOKE TREE RD
UNNAMED ST
JARGON RD
COBALT RD
FOLEY RD
WELLINGTON DR
BONANZA RD
UNNAMED RD
AVENAL ST
RC
PALMETTO WAY
CIBP
MARIPOSA AVE
LIVE OAK ST
AMARGOSA RD
I-15 FWY
MARIPOSA RD
AGACIA RD
AQ
WHITE FOX TRL
I-15 EXIT
I-15 OFFR
CASC
Engineering and Consulting
Project Boundary
City Boundary
Zoning
Aqueduct
Com/Ind Business Park
Regional Commercial
City of Victorville
N
0 375 750 1,500
US Feet
San Bernardino County, Maxar
Figure 4
Existing and Proposed Zoning

1.2.2 - Project Description

Rachamin 5, LLC., ("Applicant") proposes the development of an industrial warehouse and distribution facility totaling approximately 499,714 square feet on 30.52 acres within the City of Hesperia (City). The Project site consists of three parcels (Assessor's Parcel Numbers 0405-072-52, -53 and -55) and is generally located south of Avenal Street, North of Palmetto Way and west of Amargosa Road.

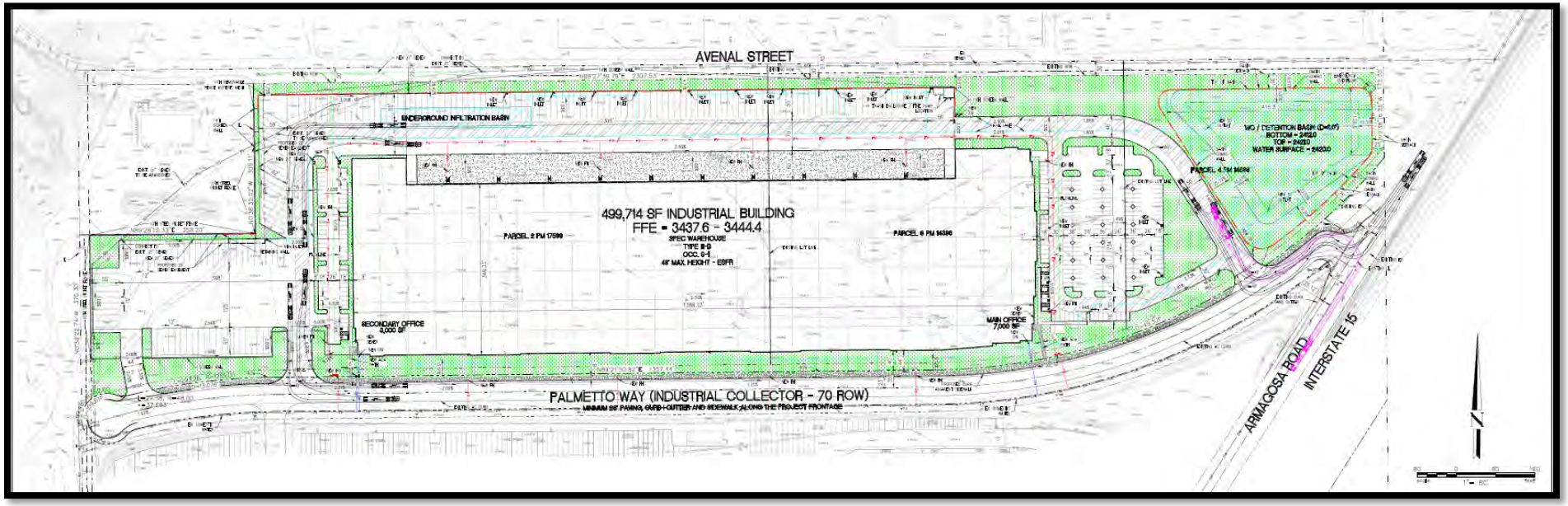
The Project would include approximately 489,714 square feet of industrial/warehouse space and 10,000 square feet of ancillary office space. Proposed site improvements include loading docks, tractor-trailer parking, passenger vehicle parking spaces, internal circulation, stormwater detention and infiltration facilities, sidewalks, and landscape totaling approximately 306,000 square feet. The Project would provide 72 loading dock positions, 171 tractor-trailer parking spaces, and 311 passenger vehicle parking spaces. See *Figure 5- Site Plan (July 2025).* Primary access to the site would be provided via three (3) driveways from Palmetto Way.

The Project site is currently vacant and characterized by relatively level terrain with ruderal/ disturbed vegetation and Joshua tree woodland. Development of the Project would required the extension of on-site and off-site utilities, including water, sewer, and electricity.

A specific tenant has not been identified; however, the facility is intended to support warehouse and distribution uses and is anticipated to employ approximately 500 to 600 employees. Operations are expected to occur 24 hours per day, seven days a week.

Implementation of the Project would require discretionary approvals from the City, including a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP), and a Conditional Use Permit to permit the construction and operation of a warehousing and distribution center of a size greater than 200,000 square feet. Additional ministerial permits, including grading and building permits, would be required.

Figure 5 – Site Plan (July 2025)



1.2.3 - Project Objectives

The following objectives have been identified in order to aid decision makers in their review of the proposed Project, and it's associated environmental impacts.

1. **Develop an Industrial Warehouse and Distribution Facility**
   Construct an industrial warehouse and distribution facility, including ancillary office space and supporting improvements, to accommodate logistics and good movement uses.

2. **Provide Industrial Uses in a Regionally Accessible Location**
   Locate industrial development within the City of Hesperia in proximity to major transportation corridors to support regional and interstate goods movement.

3. **Facilitate Efficient Use of a Vacant Site**
   Develop the approximately 30.52-acre Project site with a use that maximizes its utility while considering site constraints and surrounding land uses.

4. **Ensure Consistency with Local Planning Frameworks**
   Obtain necessary land use entitlements, including a Specific Plan Amendment and Zone Change to align the Project site's land use and zoning with the Commercial/Industrial Business Park designation, facilitating compatibility with surrounding land uses and the City's planning objectives.

5. **Provide Necessary Infrastructure and Site Improvements**
   Incorporate appropriate infrastructure and site design features, including circulation, parking, utilities, stormwater management, and landscaping, to support safe and functional operations.

6. **Support Economic Activity and Employment Opportunities**
   Contribute to the local and regional economy by providing opportunities for employment and supporting industrial and logistics- related business activity.

7. **Accommodate Modern Logistics Operations**
   Design the Project to accommodate contemporary warehouse and distribution operations, including appropriate building size, configuration, and site layout.

1.3 - Significant Unavoidable Adverse Impacts

Based on the environmental analysis conducted for the proposed Project, the following impacts were determined to be significant and unavoidable pursuant to California Environmental Quality Act (CEQA), even with implementation of all feasible mitigation measures:

Greenhouse Gas Emissions

The Project would generate greenhouse gas (GHG) emissions during construction and operation that exceed the applicable significance threshold of 3,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year established by the South Coast Air Quality Management District. As such, the Project would result in a cumulatively considerable contribution to climate change. Mitigation measures would reduce GHG emissions; however, emissions would remain above the significance threshold. Therefore, this impact is considered significant and unavoidable.

Transportation (Vehicle Miles Traveled)

The Project would result in vehicle miles traveled (VMT) per capita that exceed the City of Hesperia's established threshold for significance. Feasible mitigation measures and VMT reduction strategies were evaluated; however, the Project would not achieve a reduction sufficient to meet the applicable threshold. Therefore, impacts related to VMT would remain significant and unavoidable.

1.4 - Summary of Project Alternatives

In accordance with California Environmental Quality Act (CEQA), the EIR evaluates a reasonable range of alternatives to the proposed Project that could feasibly attain most of the Project objectives while avoiding or substantially lessening significant environmental impacts.

No Project Alternative

Under the No Project Alternative, the Project site would remain in its existing vacant condition, and no development would occur. This alternative would avoid all environmental impacts associated with the proposed Project but would not meet the Project objectives related to industrial development, site utilization, or economic activity.

Alternative 1: Reduced Intensity Industrial Alternative

This alternative would reduce the building area to approximately 350,000 square feet (approximately 70 percent of the proposed Project), with a corresponding reduction in operational intensity, including truck trips and parking demand. This alternative would reduce impacts related to greenhouse gas emissions and vehicle miles traveled; however, impacts would not be reduced to less-than-significant levels. This alternative would meet most, but not all, of the Project objectives.

Alternative 2: Enhanced Transportation Demand Management (TDM) Alternative

This alternative would maintain the overall development program but incorporate enhanced transportation demand management strategies and sustainability features intended to reduce vehicle trips and associated emissions. While this alternative would incrementally reduce transportation and greenhouse gas impacts, it would not reduce impacts to a less-than-significant level and would generally meet the Project objectives.

Alternative 3: Reduced Building Footprint with Expanded Landscape Buffer Alternative

This alternative would reduce the building size to approximately 475,000 square feet and increase landscaped setbacks and buffers along key frontages. This alternative would result in modest reductions in operational impacts and improved visual character but would not substantially reduce significant impacts related to greenhouse gas emissions or vehicle miles traveled. This alternative would meet most of the Project objectives.

Environmentally Superior Alternative

The No Project Alternative would be the environmentally superior alternative because it would avoid all impacts associated with development of the site. Among the development alternatives, the Reduced Intensity Industrial Alternative would be environmentally superior, as it would result in the greatest reduction in operational impacts compared to the proposed Project.

1.5 - Areas of Controversy

Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15123(b), this section summarizes areas of controversy known to the lead agency, including issues raised by public agencies and the public, as well as key issues to be resolved by decision makers.

Prior to preparation of the Draft EIR, the City of Hesperia circulated a Notice of Preparation (NOP) on September 16, 2025. Comments received during the public review period (September 16, 2025, through October 16, 2025) are included in Appendix N. A summary of these comments and corresponding EIR responses is provided in Table 2-1.

Based on comments received during the NOP process and issues identified during preparation of the Draft EIR, the primary areas of controversy include:

- Potential impacts related to greenhouse gas (GHG) emissions and the Project's contribution to climate change;
- Transportation impacts associated with vehicle miles traveled (VMT), including the effectiveness of feasible mitigation measures;
- Air quality impacts associated with construction and operation of a large-scale warehouse and distribution facility, including emissions from diesel trucks;
- The scale and intensity of the proposed industrial development and its compatibility with surrounding land uses; and
- The adequacy and feasibility of mitigation measures to reduce environmental impacts.

Key issues to be resolved by the decision-making body include:

- Selection among the proposed Project and the alternatives analyzed in this EIR;
- Determination of whether feasible mitigation measures or alternatives can reduce identified impacts to less-than-significant levels; and
- Whether to approve the Project notwithstanding significant and unavoidable impacts, which would require adoption of a Statement of Overriding Considerations.

1.6 - Project Impacts

The City of Hesperia determined that an Environmental Impact Report (EIR) should be prepared pursuant to California Environmental Quality Act (CEQA). Environmental topics evaluated in this EIR include air quality, greenhouse gas emissions, and transportation.

Section 5.0, Environmental Analysis, provides a detailed evaluation of potential environmental impacts associated with implementation of the proposed Project and identifies mitigation measures, where feasible, to reduce impacts.

As discussed in Section 5.0, impacts related to air quality would be less than significant. Although concerns regarding air quality were raised during the Notice of Preparation (NOP) process, the Project's emissions would not exceed applicable thresholds of significance.

After implementation of all feasible mitigation measures, most impacts associated with the proposed Project would be reduced to a less-than-significant level. However, the following impacts would remain significant and unavoidable:

Greenhouse Gas Emissions

- The Project would generate greenhouse gas emissions that exceed applicable thresholds and would result in a cumulatively considerable contribution to climate change. Mitigation measures would reduce emissions; however, impacts would remain significant.

Transportation (Vehicle Miles Traveled)

- The Project would result in vehicle miles traveled (VMT) per capita exceeding the City's threshold of significance. Feasible mitigation measures would not reduce VMT impacts to a less-than-significant level.

1.7 - Summary of Project Impacts and Mitigation Measures

Table 1.7-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed Project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR and the previous Initial Study (Appendix N). Table 1.7-1 is included in the Focused EIR as required by CEQA Guidelines Section 15123(b)(1).

Table 1.7-1: Summary of Project Impacts and Mitigation Measures

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Initial Study—Biological Resources			
Impact BIO-(a): The Project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	The following mitigation measures supersede and replace the biological mitigation measures identified in the Initial Study. Strikeout text indicates language removed from the Initial Study; underlined text indicates revised or added language based on the 2025 Biological Resources Habitat Assessment. **BIO-1 Western Joshua Tree Permitting and Desert Native Plant Protection** Prior to any ground disturbance, a qualified biologist or botanist shall complete an updated Western Joshua tree inventory and prepare a Desert Native Plant Protection and Relocation Plan consistent with the California Desert Native Plant Act and Chapter 16.24 of the City of Hesperia Municipal Code. The Plan shall provide specifications for treatment, avoidance, or relocation of protected species such as Western Joshua tree, mesquite, smoke tree, and large creosote bush. Any removal, trimming, relocation, or other disturbance of Western Joshua trees or other protected desert plants shall comply with the Western Joshua Tree Conservation Act (WJTCA) and the City's Protected Plant Policy. The project proponent shall obtain an Incidental Take Permit (ITP) from CDFW prior to tree removal and shall implement all avoidance, minimization, and compensatory mitigation required by the ITP, such as	Less than significant impact.	Prior to ground disturbance Applicant and City of Hesperia

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	relocation, on-site retention, or payment of mitigation fees. All permits, plans, and agency approvals shall be finalized prior to issuance of grading permits. **BIO-2 Focused Biological Surveys** Prior to any ground-disturbing activities, the applicant shall retain a qualified biologist to conduct focused surveys within the project disturbance area for special-status plants and wildlife species with potential to occur onsite, including rare plants, Western Joshua tree, burrowing owl, Crotch's bumble bee, desert tortoise, Mohave ground squirrel, and other species identified in the 2025 Biological Resources Habitat Assessment. Surveys shall be conducted in accordance with the most current CDFW and USFWS-approved protocols and during the appropriate seasonal windows. If any special-status species are detected, the applicant shall coordinate with the relevant agencies to determine appropriate avoidance, relocation, or mitigation measures. All required measures shall be implemented and verified prior to the start of construction. **BIO-3 Burrowing Owl Avoidance and Relocation** If Western burrowing owls are detected during the focused or pre-construction surveys, the applicant shall immediately notify CDFW and implement		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	avoidance or relocation measures consistent with the *CDFW Staff Report on Burrowing Owl Mitigation (2012)*. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies that owls have not begun nesting or juveniles are capable of independent survival. Passive relocation using one-way doors and removal of inactive burrows shall only occur under the supervision of a qualified biologist and in coordination with CDFW. All exclusion and relocation efforts shall be documented and submitted to the City and CDFW prior to the start of construction. **BIO-4 Nesting Bird and Bat Protection** If construction or vegetation removal is scheduled during the avian breeding season (March 1 through August 31), a qualified biologist shall conduct pre-construction surveys for nesting birds and roosting bats no more than 72 hours prior to disturbance. If active nests or roosts are identified, species-appropriate no-disturbance buffers shall be established and maintained until a qualified biologist determines that young have fledged or the roost is no longer active.		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	All measures shall comply with the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 3513. **BIO-5 Mitigation Implementation and Verification** All biological surveys, coordination, and agency-required mitigation actions shall be completed prior to issuance of grading permits. Documentation of survey results and evidence of agency compliance (e.g., ITPs, relocation reports, CDFW correspondence) shall be submitted to the City for review and inclusion in the project record.		
Impact BIO-(b): The Project could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.	Implement **BIO-(1)** and **BIO-(5).**	Less than significant impact.	Prior to ground disturbance. Applicant and City of Hesperia
Impact BIO-(e): The Project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Implement **BIO-(1)** and **BIO-(2).**	Less than significant impact.	Prior to ground disturbance. Applicant and City of Hesperia
Initial Study—Cultural and Tribal Cultural Resources			

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact CUL-(b): The Project could cause a substantial adverse change in the significance of a archaeologist resource pursuant to Section 15064.5 of the CEQA Guidelines.	**CUL-(1)- Inadvertent Finds** In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease. A qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards shall be retained to assess the significance of the find. Work may continue on other portions of the Project site outside the buffered area during this assessment. If the discovery is determined to be of Native American origin, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as outlined in TCR-1, and provided information following the archaeologist's initial assessment to allow for Tribal input on the significance and recommended treatment of the resource. **CUL-(2)- Monitoring Plan** If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly. **CUL-(3)- Human Remains Discovery**	Less than significant impact.	During ground disturbance. Applicant and City of Hesperia

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	If human remains or funerary objects are encountered, all work shall stop in the area (within an 100-foot buffer of the find) and the County Coroner must be notified immediately in accordance with California Health and Safety Code Section 7050.5. No further disturbance shall occur until the Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be prehistoric, the Coroner shall notify the Native American Heritage Commission (NAHC), which will identify and notify the Most Likely Descendant (MLD). With permission of the landowner or authorized representative, the MLD may inspect the site and shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of the remains and any associated items.		
Impact CUL-(c): The Project could disturb human remains, including those outside of formal cemeteries.	**Implement MMCUL-(1), MMCUL-(2), MMCUL-(3).**	Less than significant impact.	During ground disturbance. Applicant and City of Hesperia
Initial Study—Geology and Soils			

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Impact GEO-(c): The Project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	**MMGEO-(1)- Grading and Construction** The Project shall incorporate the recommendations provided in the Geotechnical Investigation prepared by Southern California Geotechnical, dated July 18, 2022 (Appendix F). The recommendations are presented in the following sections of the report: Site Grading Recommendations, Construction Considerations, Foundation Design and Construction, Floor Slab Design and Construction, Retaining Wall Design and Construction, and Pavement Design Parameters.	Less than significant impact.	Prior to start of construction Applicant and City of Hesperia
Impact GEO-(f): The Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**MMGEO-(2)- Paleontological Monitoring** A paleontological monitor shall be present during ground disturbing activities below four (4) feet in depth within the Project. The monitor shall work under the direct supervision of a qualified paleontologist (B.S./B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated competence in paleontological research, fieldwork, reporting, and curation). 1) The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols. 2) The paleontological monitor shall be present full-time during ground disturbance below 4 feet in depth within the Project, including but not limited	Less than significant impact.	During ground disturbing activities below four (4) feet in depth within the Project. Applicant and City of Hesperia

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	to grading, trenching, utilities, and off-site easements. If, after excavation begins, the qualified paleontologist determines that the sediments are not likely to produce fossil resources, monitoring efforts shall be reduced. 3) The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered. 4) In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area. 5) In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly mapped, documented, removed, and the area cleared. 6) If the discovery is significant the qualified paleontologist shall notify the CLIENT and CITY immediately. 7) In consultation with the CLIENT and CITY the qualified paleontologist shall develop a plan of mitigation which will likely include full-time monitoring, salvage excavation, scientific removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Section 5.01—Greenhouse Gas Emissions			
Impact GHG-(a): The Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	**MM GHG-1** The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible: • Only haul trucks meeting model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site. • Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the 14848-04 GHG Report 48 Amargosa and Palmetto High-Cube Warehouse parking brake is engaged; and (3) telephone numbers of the building facilities manager and CARB to report violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place.	Significant and unavoidable impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	• Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment. • The minimum number of automobile electric vehicle (EV) charging stations required by the California Code of Regulations Title 24 shall be provided. In addition, the buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future. • Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available. **MM GHG-2** • The Project shall implement the following measures in order to reduce operational energy source air pollutant emissions to the extent feasible:		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	• The Project shall include rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid. • Install Energy Star-rated heating, cooling, lighting, and appliances. • Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project. • Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment. **MM GHG-3** • The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible: • Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as forklifts,		

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	handheld landscaping equipment, yard trucks, office appliances, etc. • Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible. • Tenants shall be in, and monitor, compliance with all current air quality regulations for on-road trucks including the CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation. **MM GHG-4** • Prior to the issuance of a building permit, Developer shall provide documentation to the City of Hesperia demonstrating that the Project will achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application.		
Impact GHG-(b): The Project would conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	None.	Significant and unavoidable impact.	None.

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
Section 5.02—Transportation and Traffic			
Impact TRANS-(a): The Project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	**MMTRANS-(1)** Contribute fair share as determined by the City to construct a second southbound left turn lane at Key Pointe Drive (NS) at Main Street (EW).	Less than Significant impact.	Prior to issuance of occupancy permit Applicant and City of Hesperia
Impact TRANS-(b): The Project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	***MMTRANS-(2)*** Prior to issuance of an occupancy permit, the Project Applicant shall designate carpool and vanpool parking spaces in convenient locations near employee building entrances. The spaces shall be clearly marked and reserved for carpool and vanpool use. The designated spaces shall be shown on the final site plan and maintained for the life of the Project. ***MMTRANS-(3)*** Prior to issuance of an occupancy permit, the Project Applicant shall provide end-of-trip facilities to encourage employees to use bicycles and other alternative modes of transportation. Such facilities shall include bicycle parking, lockers, and similar amenities, as appropriate. The facilities shall be shown on the final site plan and maintained for the life of the Project. ***MMTRANS-(4)*** Prior to issuance of an occupancy permit, the Project Applicant shall develop and implement a commute trip reduction marketing program for Project employees. Informational materials promoting alternatives to single-	Significant and unavoidable impacts.	Prior to issuance of occupancy permit Applicant and City of Hesperia

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	occupant vehicle travel, including carpooling, vanpooling, transit, bicycling, and walking, shall be displayed in prominent employee locations, such as employee break rooms, employee entrances, or other common areas. The informational materials shall be maintained for the life of the Project.		
Initial Study- Tribal and Cultural Resources			
Impact TCR-(a): The proposed Project could cause a substantial adverse change in listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). **Impact TCR-(b):** The Project could have an adverse impact on a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	**MMTCR-(1): Tribal Notification and Monitoring Plan** The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in CUL-1, of any pre-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site. **MMTCR-(2): Tribal Coordination and Documentation Sharing with YSMN** Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey	Less than significant impact.	Prior to ground disturbance. If previously unidentified cultural materials are unearthed during construction Applicant and City of Hesperia

Impacts	Mitigation Measures	Level of Significance After Mitigation	Monitoring
	reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the project.		

1.8 - Public Review of the Draft Focused EIR

Upon completion of the Draft Focused EIR, the City of Hesperia filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft Focused EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft Focused EIR in accordance with Public Resources Code 21092(b)(3). During the public review period, the Draft Focused EIR, including the technical appendices, is available for review at the City of Hesperia Planning Department offices. The address is provided below:

City of Hesperia
9700 Seventh Avenue
Hesperia, CA 92345
Hours:
Monday–Thursday: 7:30 a.m. to 5:30 p.m.
Friday: 7:30 a.m. to 4:30 p.m.

Agencies, organizations, and interested parties have the opportunity to comment on the Draft Focused EIR during the 45-day public review period. Written comments on this Draft Focused EIR should be addressed to:

Edgar Gonzalez, Senior Planner
Planning Division
9700 Seventh Avenue
Hesperia, CA 92345
Phone: 760.947.1330
Email: egonzalez@hesperiaca.gov

Submittal of electronic comments in Microsoft Word or Adobe PDF format is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared and made available for review by the commenting agencies at least 10 days prior to the public hearing before the County of Riverside on the proposed Project, at which the certification of the Final Focused EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the proposed Project.

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SECTION 2: INTRODUCTION AND PURPOSE

The California Environmental Quality Act (CEQA) requires that all State and local agencies consider the environmental consequences of projects over which they have discretionary authority. An Environmental Impact Report (EIR) is intended to provide decision-makers and the public with information concerning the environmental effects of a proposed Project, ways to reduce or avoid environmental damage, and to identify feasible alternatives to the Project. An EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; as well as significant cumulative impacts of all past, present, and reasonably anticipated future projects.

The purpose of this EIR is to review the existing conditions, analyze potential environmental impacts, identify General Plan goals and policies that serve as mitigation, and identify additional mitigation measures to reduce potentially significant effects of the proposed Project. A key assumption for both the Project and this EIR is that the goals, policies, and implementation measures identified in the General Plan will be implemented, in addition to the mitigation measures identified in Section 1, Table 1.7-1 of this EIR.

With this assumption, this EIR employs a conservative analytical approach that considers applicable General Plan goals and policies as part of the environmental baseline for evaluating and reducing potential impacts. This approach helps ensure that development-related impacts associated with the proposed Project are fully evaluated and addressed through enforceable mitigation measures and applicable policies.

2.1 - Authority

The City of Hesperia (City) is the Lead Agency under CEQA Guidelines Article 4, Section 15367 and is responsible for analyzing the environmental impacts of the Project. This EIR has been prepared in conformance with CEQA (California Public Resources Code [PRC] Section 21000 et seq.); CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.); and the rules, regulations, and procedures for implementation of CEQA, as adopted by the County. The principal CEQA Guidelines sections governing content of this document are Articles 9 and 10 (Contents of Environmental Impact Reports and Considerations in Preparing EIR and Negative Declarations, respectively). Pursuant to CEQA Guidelines Section 15040 through Section 15043, the County has the legal authority to:

- Approve the proposed Project;
- Require feasible changes in any or all activities involved in the Project in order to substantially lessen or avoid significant effects on the environment;
- Disapprove the Project;
- Approve the Project even though the Project would cause a significant effect on the environment if the City makes a fully informed and publicly disclosed decision that: 1) there is no feasible way to lessen the effect or avoid the significant effect; and 2) expected benefits from the Project will outweigh significant environmental impacts of the Project.

2.2 - Approach

This Environmental Impact Report (EIR) has been prepared as a Draft EIR pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines (California Code of Regulations, Title 14,

Section 15000 et seq.). A Draft EIR is appropriate when only certain environmental topics require detailed analysis due to the potential for significant impacts, while other topics are determined to have no impact or less-than-significant impacts through an Initial Study.

An Initial Study was prepared for the proposed Project—a 499,714 square-foot industrial building and associated improvements in the City of Hesperia. The Initial Study identified the potential for significant environmental impacts in the following resource areas: Greenhouse Gas Emissions, Transportation and Air Quality. Based on these findings, these topics were carried forward for further analysis in this Draft EIR.

Detailed technical studies and regulatory consistency evaluations were prepared to support the environmental analysis. As documented in this Draft EIR, all environmental impacts—with the exception of Greenhouse Gas Emissions and Transportation—would be reduced to less-than-significant levels through the implementation of project-specific mitigation measures, compliance with existing regulations, and consistency with applicable General Plan policies. However, despite incorporation of feasible mitigation, the Project would result in a significant and unavoidable impact related to exceedance of the South Coast Air Quality Management District (SCAQMD) recommended threshold of 3,000 MTCO2e per year and Vehicle Miles Traveled (VMT), in accordance with CEQA Guidelines and SB 743.

This Draft EIR provides a thorough assessment of the Project's greenhouse gas emissions and transportation impacts, identifies feasible mitigation measures, and evaluates project alternatives intended to reduce or avoid those impacts. The EIR also provides a comprehensive environmental record to support informed decision-making by the City of Hesperia, as the Lead Agency, in its consideration of the proposed Project and associated entitlements.

2.3 - Compliance with CEQA

2.3.1 - Public Review of Draft EIR

This Draft EIR is subject to a 45-day review period by responsible and trustee agencies and interested parties. In accordance with the provisions of Sections 15085(a) and 15087(a)(1) of the CEQA Guidelines, the City of Hesperia, serving as the Lead Agency, has (1) published a Notice of Availability (NOA) to the public of a Draft EIR; and (2) prepared and transmitted a Notice of Completion (NOC) to the California State Clearinghouse. Proof of publication is available at the City of Hesperia Planning Department. Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing to the Lead Agency at the address on the NOC prior to the end of the public review period. The Lead Agency will evaluate and prepare responses to all written comments received from both citizens and public agencies during the public review period.

2.3.2 - Final EIR

The Final EIR will consist of the Draft EIR, any necessary revisions to the Draft EIR, comments received in the review process, a list of persons commenting, and responses to comments. After the Final EIR is completed, and at least 10 days prior to the certification hearing, a copy of the response to comments made by public agencies on the Draft EIR will be provided to the commenting agencies.

2.4 - Intended Uses of this EIR

In accordance with Section 15124(d) of the California Environmental Quality Act (CEQA) Guidelines, this Environmental Impact Report (EIR) is intended to evaluate the potential environmental impacts associated with the proposed Project and to inform decision-makers, responsible agencies, trustee agencies, and the public of the potential environmental consequences of Project implementation.

- Approval of a Specific Plan Amendment to modify the Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP);
-
- Approval of a Conditional Use Permit (CUP) to allow construction and operation of a warehouse and distribution facility exceeding 200,000 square feet within the CIBP zone;
- Approval of Grading and Building Permits to authorize site preparation, construction, and associated infrastructure improvements;
- Certification of this EIR, confirming compliance with the California Environmental Quality Act (CEQA); and
- Adoption of Findings of Fact, a Mitigation Monitoring and Reporting Program (MMRP), and a Statement of Overriding Considerations for identified significant and unavoidable impacts related to Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions.

In addition, this EIR may be used by other responsible or trustee agencies that may have discretionary authority over aspects of the Project or related infrastructure improvements. These agencies may include, but are not limited to:

- California Department of Fish and Wildlife (CDFW) – for potential impacts to biological resources, including Joshua trees and other sensitive species or habitats that may require authorization under the California Endangered Species Act (CESA);
- State Water Resources Control Board (SWRCB) and/or Lahontan Regional Water Quality Control Board (RWQCB – Region 6) – for compliance with the National Pollutant Discharge Elimination System (NPDES) and stormwater quality regulations associated with the Municipal Separate Storm Sewer System (MS4) permit;
- Mojave Desert Air Quality Management District (MDAQMD) – for air quality permits, construction emissions review, and verification of compliance with applicable air quality management plans;
- Native American Heritage Commission (NAHC) – for consultation and coordination in accordance with Assembly Bill (AB) 52 and Public Resources Code Section 21080.3.1, as well as potential identification of culturally significant resources; and
- California Department of Transportation (Caltrans) – for review of potential transportation and access improvements along Amargosa Road and connections to the regional circulation network, including proximity to Interstate 15.

This EIR is intended to provide the environmental analysis necessary for these agencies to consider their respective permits, approvals, or actions, in accordance with CEQA.

2.5 - EIR Scoping Process

In compliance with the CEQA Guidelines, the City of Hesperia has provided opportunities for the public to participate in the environmental review process. During preparation of the EIR, efforts were made to

contact various Federal, State, regional and local government agencies and other interested parties to solicit comments on the proposed Project. This included the distribution of a Notice of Preparation (NOP) on September 16, 2025.

2.5.1 - Initial Study

An Initial Study was utilized in the preparation of this EIR by identifying the effects determined not to be significant, and focusing the analysis of this EIR on the effects determined to be significant, consistent with CEQA Guidelines Section 15063. The Initial Study screened out a number of topics with no impact or less than significant impact including aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, population and housing, public services recreation, tribal cultural resources, utilities and service systems, and wildfire. This EIR will focus on the following potentially significant impacts as identified in the Initial Study:

- Greenhouse Gas Emissions
- Transportation/Traffic
- Air Quality

2.5.2 - Notice of Preparation

Pursuant to the provision of Section 15082 of the CEQA Guidelines, the City of Hesperia circulated a NOP to public agencies, special districts and members of the public who had requested such notice for a 30-day period, beginning September 16, 2025, and ending October 16, 2025. The purpose of the NOP was to formally announce that the City is preparing a Draft EIR for the proposed Project, and that the Lead Agency was soliciting input regarding the scope and content of the environmental information to be included in the EIR. The Project's Initial Study was circulated with the NOP and is included as Appendix A of this EIR. The NOP and comments received on the NOP are included in Appendix A of this EIR.

2.5.3 - NOP and Scoping Results

The City of Hesperia received NOP comments from the following:

- Center for Community Action and Environmental Justice (CCAEJ)
- Mojave Desert Air Quality Management District (MDAQMD)
- California Department of Justice
- CARECA
- Mojave Water Agency
- Native American Heritage Commission

Comments received during the NOP period were reviewed to identify those addressing environmental concerns, which are summarized in Table 2.5.4-1 below. All comments related to environmental issues associated with the proposed Project are addressed within this EIR, including the Initial Study and the Technical Studies appended to it. The table identifies the Agency/Organization who submitted the comment, the date the comment was received, a summary of the comment as well as the location in this EIR where the comment is addressed. NOP comment letters are provided in Appendix A of this EIR.

Table 2.5.4-1 Summary of NOP Comments

Agency/ Organization/ Individual	Date	Comments	Location in this EIR Where Comment is Addressed
Center for Community Action and Environmental Justice (CCAEJ)	October 16,2025	• The review of the NOP raises concerns that the proposed Project may not meet AB 98 separation requirements from existing residences north of Avenal Street. Figure 5 (Site Plan, July 2025) suggests some drive aisles and trailer storage areas may be too close, so the City is encouraged to confirm that proper separation distances are accurately shown and maintained. • The Project should proactively plan for future use of zero-emission equipment, trucks, and refrigeration units by including conduit and infrastructure for charging equipment during the initial construction phase. • The City should ensure all street and roadway improvements follow Caltrans recommendations for safe and appropriate bike infrastructure and parking. Implementing these measures will promote biking and similar transportation modes, helping reduce vehicle miles traveled (VMT) by making active transportation safer and more viable.	The commenter raises concerns regarding compliance with Assembly Bill (AB) 98 separation requirements, the incorporation of infrastructure to support future zero-emission technologies, and bicycle and active transportation improvements. With respect to AB 98, the Project site plan and operational characteristics were evaluated for consistency with applicable State and local requirements. As discussed in Sections 5.01, Air Quality, 5.02, Greenhouse Gas Emissions, and 5.03, Transportation, the Project has been designed to comply with applicable development standards, including required setbacks and operational requirements. The site plan included in the EIR reflects the proposed development configuration evaluated for environmental impacts. Regarding zero-emission vehicle and equipment infrastructure, the commenter's recommendation has been noted. As discussed in Sections 5.01 and 5.02, the Project incorporates applicable regulatory requirements and design features intended to reduce air pollutant emissions and greenhouse gas emissions. Future advancements in zero-emission technologies and

Agency/ Organization/ Individual	Date	Comments	Location in this EIR Where Comment is Addressed
			associated infrastructure may be incorporated during final engineering and building permit review, as required by applicable regulations in effect at the time of development. With respect to bicycle infrastructure and active transportation, the Transportation analysis in Section 5.03 evaluates the Project's transportation impacts, including vehicle miles traveled (VMT), consistent with CEQA requirements. Any required roadway and frontage improvements will be reviewed by the City and implemented in accordance with applicable City standards and requirements. The City appreciates the commenter's recommendations regarding bicycle facilities and will consider them during final design and permitting, as appropriate. - The commenter's concerns have been considered and are addressed in Sections 5.01 (Air Quality), 5.02 (Greenhouse Gas Emissions), and 5.03 (Transportation) of the EIR. No additional significant environmental impacts have been identified as a result of the issues raised.
Mojave Desert Air Quality Management District (MDAQMD)	October 1, 2025	• The District concurs that the Project will not significantly impact ambient air quality. The owner/operator must	The Mojave Desert Air Quality Management District (MDAQMD) reviewed the Notice of Preparation and provided comments regarding compliance

Agency/ Organization/ Individual	Date	Comments	Location in this EIR Where Comment is Addressed
		obtain a Dust Control Plan (DCP) from MDAQMD, with current requirements and forms available at mdaqmd.ca.gov • Install Rule 403-compliant signage at all site entrances before construction starts. • Control dust using water trucks, chemical stabilization, or gravel on disturbed surfaces, especially exposed sand or fines. • Maintain perimeter wind fencing at least four feet high, unless superseded by local rules or biological mitigation. • Stabilize all roads, parking areas, and other surfaces to prevent visible dust and trackout, cleaning any trackout within 24 hours. • Obtain permits for any non-exempt equipment, such as internal c s i n en ines brake horsepower, under District Rule 219. • Comply with all applicable provisions listed in Rule 403- Fugitive Dust Control	with District permitting requirements and fugitive dust control measures during Project construction. The City acknowledges the District's concurrence that the Project would not result in a significant impact to ambient air quality. As discussed in Section 5.01, Air Quality, of the EIR, the Project's construction and operational air quality impacts were evaluated using applicable MDAQMD thresholds and methodologies. The analysis concluded that Project-related emissions would not exceed applicable significance thresholds. The commenter's recommendations regarding preparation of a Dust Control Plan, installation of Rule 403-compliant signage, implementation of dust suppression measures, stabilization of disturbed surfaces, perimeter wind fencing, prevention and cleanup of trackout, equipment permitting requirements, and compliance with Rule 403 Fugitive Dust Control requirements are acknowledged. These requirements constitute existing regulatory obligations and standard conditions administered and enforced by MDAQMD during Project construction and operation, as applicable. The Project applicant will be required

Agency/ Organization/ Individual	Date	Comments	Location in this EIR Where Comment is Addressed
			to comply with all applicable MDAQMD rules, regulations, permitting requirements, and dust control measures in effect at the time of construction, including obtaining any required permits for non-exempt equipment and implementing approved dust control measures. - The EIR's air quality analysis accounts for compliance with applicable federal, State, and local regulations, including MDAQMD requirements. Therefore, the comments do not identify a new significant impact or substantially increase the severity of any impact analyzed in the EIR. No revisions to the impact conclusions are required. The issues raised by the commenter are addressed in Section 5.01, Air Quality, of the EIR.
California Department of Justice	September 29, 2025	• Warehouses play a key economic role but can impact communities through diesel emissions that harm air quality and health, high noise levels from operations, increased traffic and road hazards, and other site-specific environmental effects. • The Attorney General's Bureau of Environmental Justice has published best practices and mitigation measures for warehouse projects to help lead	The EIR evaluates potential environmental impacts associated with air quality, greenhouse gas emissions, transportation, and noise, including impacts related to diesel particulate matter, truck traffic, and operational activities. These topics are addressed in the Air Quality, Transportation, Noise, and Cumulative Impacts sections of the EIR. The EIR also considers the proximity of sensitive receptors and evaluates potential exposure to operational emissions and

Agency/ Organization/ Individual	Date	Comments	Location in this EIR Where Comment is Addressed
		agencies address environmental impacts. A copy is attached and available online, and agencies are encouraged to use it when preparing the project's draft environmental impact report. • Priority should be given to avoiding or mitigating conflicts between warehouses and sensitive receptors. Even distant warehouses can contribute to regional air pollution or affect sensitive receptors if truck routes pass nearby, so emission-reduction measures should be considered.	traffic-related impacts. Where feasible and supported by substantial evidence, mitigation measures have been incorporated to reduce impacts associated with air emissions, truck activity, and operational noise. The City has also considered best practices and guidance materials, including those referenced by the California Department of Justice Bureau of Environmental Justice, in the development of the Project analysis and mitigation framework.
CARECA	October 16, 2025	• An EIR should give decisionmakers and the public detailed information on a project's environmental impacts, feasible mitigation measures, and reasonable alternatives, presented clearly enough for meaningful review and deliberation. A complete analysis of all impacts and mitigation is requested. • CARE CA requests that the City ensure the DEIR thoroughly analyzes air quality and public health impacts, revisiting the Initial Study's "less than significant" conclusion and aligning impact	The City acknowledges the comment regarding the scope and adequacy of the EIR, including the analysis of air quality, public health, greenhouse gas emissions, mitigation measures, and alternatives. Consistent with CEQA requirements, the EIR evaluates the Project's environmental impacts, identifies feasible mitigation measures, and considers a reasonable range of alternatives. Air quality and health-related impacts are addressed in Section 5.01 (Air Quality), greenhouse gas emissions are addressed in Section 5.02 (Greenhouse Gas Emissions), mitigation measures

Agency/ Organization/ Individual	Date	Comments	Location in this EIR Where Comment is Addressed
		estimates with current research on pollution and environmental stress. Additionally, the DEIR should use quantitative thresholds for greenhouse gas emissions that reflect the urgent threat of climate change. • CARE CA urges the City to use modern, effective, and enforceable mitigation measures, and to consider a Statement of Overriding Considerations only after all feasible measures are included in the Mitigation Monitoring and Reporting Program (MMRP).	are incorporated throughout Chapter 5.0 and summarized in the Mitigation Monitoring and Reporting Program, and alternatives are evaluated in Chapter 7.0 (Alternatives). The City has prepared the EIR in accordance with CEQA and considered all feasible mitigation measures identified through the environmental review process.
Mojave Water Agency	September 29,2025	• The Mojave Water Agency has reviewed the project and found no existing facilities or infrastructure in the area based on the submitted information. If any information is incomplete, MWA should be notified to provide additional details.	Utilities and service systems, including water infrastructure, were analyzed in the Initial Study/Mitigated Negative Declaration (ISMND) prepared for the Project and determined to be less than significant. Accordingly, utilities were not carried forward as a topic of detailed analysis in the Draft EIR. Relevant information is contained in the Initial Study/ISMND, which is incorporated by reference and included in Appendix N. The Mojave Water Agency's comments are consistent with the Initial Study findings. If additional information is required, it will be coordinated with the Agency as needed.

Agency/ Organization/ Individual	Date	Comments	Location in this EIR Where Comment is Addressed
Native American Heritage Commission	September 18,2025	• The NAHC recommends early consultation with California Native American tribes to protect tribal cultural resources and avoid inadvertent discoveries of human remains. Under AB 52 and SB 18, lead agencies must notify tribes, begin consultation promptly, address impacts and mitigation, and maintain confidentiality of tribal information. Consultation ends when agreements on mitigation are reached or deemed impossible. Agencies should also conduct archaeological records searches, surveys, and plan for monitoring and treatment of any discovered resources with input from certified archaeologists and culturally affiliated tribes.	Tribal cultural resources, including compliance with AB 52, were evaluated and addressed in the Initial Study prepared for the Project. The City completed the AB 52 tribal consultation process during the Initial Study phase, including notification to tribes and coordination as applicable. The Initial Study determined that impacts to tribal cultural resources would be less than significant with incorporation of standard conditions and applicable regulations. Therefore, tribal cultural resources were not carried forward for detailed analysis in the Draft EIR. Relevant information regarding AB 52 compliance and consultation is documented in the Initial Study/ISMND, which is incorporated by reference and included in Appendix N.

2.6 - Format of the EIR

Section 1.0, Executive Summary, provides a brief Project description and summary of the environmental impacts, mitigation measures, and alternatives.

Section 2.0, Introduction and Purpose, provides an overview of the proposed Project, as well as the scope, use, and approach of the EIR, including CEQA compliance information.

Section 3.0, Project Description, provides a detailed Project description. This section describes the environmental setting and defines the Project.

Section 4.0, Cumulative Impacts, describes the approach and methodology for cumulative impact analysis.

Section 5.0, Environmental Analysis, evaluates the impacts associated with the Project. This section contains a detailed environmental analysis of the existing conditions, Project impacts, recommended mitigation measures, cumulative impacts, and any unavoidable adverse impacts for three (3) environmental topic areas. The analyses are based in part upon technical reports that are appended to this EIR. Information also is drawn from sources of analytical materials that directly or indirectly relate to the Project and are cited in Section 10, References of this EIR.

Where the analysis demonstrates that a physical adverse environmental effect may or would occur, mitigation measures are recommended to reduce impacts to a less than significant level. If mitigation measures are not available or feasible to reduce an identified impact to below a level of significance, the environmental effect is identified as a significant and unavoidable adverse impact, for which a statement of overriding considerations would need to be adopted by the City of Hesperia pursuant to CEQA Guidelines Section 15093, prior to Project approval.

Section 6.0, Alternatives, describes a reasonable range of alternatives to the Project that could avoid or substantially lessen the significant impact of the Project and still feasibly attain the basic Project objectives.

Section 7.0, Other CEQA Considerations, discusses the long-term effects associated with the proposed Project, including the potential growth associated with the proposed action and energy conservation.

Section 8.0, Effects Found Not to Be Significant, provides an explanation of potential impacts that have been determined not to be significant.

Section 9.0, Significant Unavoidable Impacts, describes those impacts that remain significant following mitigation.

Section 10.0, References, identifies the organizations and individuals contacted during the preparation of the Project's EIR, report preparation personnel, and a list of reference materials.

The following Appendices contain the technical documentation for the EIR:

- Appendix A- Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis, City of Hesperia, Urban Crossroads, March 24,2026.

- Appendix B- Amargosa and Palmetto High-Cube Warehouse Mobile Source Health Risk Assessment, City of Hesperia, Urban Crossroads, March 24, 2026.
- Appendix C- Amargosa Road & Palmetto Way Spec. Industrial Project, City of Hesperia, San Bernardino County, California, Biological Resources Assessment Report, CASC Inc. October, 2022.
- Appendix C1- 2025 Biological Resources Habitat Assessment Report for Amargosa Road & Palmetto Way, Spec. Industrial Project, City of Hesperia, San Bernardino County, Osprey Environmental Analysis, November 3, 2025.
- Appendix D- Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project, City of Hesperia, San Bernardino County, California, Duke CRM, September 23,2022.
- Appendix E- Amargosa and Palmetto High-Cube Warehouse, Energy Analysis, City of Hesperia, Urban Crossroads, March 24, 2026.
- Appendix F- Geotechnical Investigation, Proposed Warehouse, NWC Palmetto Way and Amargosa Road, Hesperia, California, Southern California Geotechnical, July 18, 2022.
- Appendix G- Amargosa and Palmetto High-Cube Warehouse, Greenhouse Gas Analysis, City of Hesperia, Urban Crossroads, March 24, 2026.
- Appendix H- Hesperia Spec. Industrial Buildings, City of Hesperia, California, Preliminary Hydrology Report, West Land Group, Inc. July 2022.
- Appendix I- Mojave River Watershed Conceptual Water Quality Management Plan, Hesperia Spec. Industrial, West Land Group, Inc. July, 13, 2022.
- Appendix J-Amargosa and Palmetto High-Cube Warehouse Noise Impact & Vibration Analysis, City of Hesperia, Urban Crossroads, March 24,2026.
- Appendix K- Amargosa and Palmetto High-Cube Warehouse Revised Traffic Impact Analysis, City of Hesperia, Ganddini Group, Inc. August 21,2025
- Appendix L- Amargosa and Palmetto High-Cube Warehouse Truck Trip Generation Comparision Analysis, Ganddini Group, Inc. September 6, 2023.
- Appendix M- Amargosa and Palmetto High-Cube Warehouse Project, Vehicle Miles Traveled Analysis, Ganddini Group, Inc. July 8, 2025.
- Appendix M.1 - Revised Vehicle Miles Traveled (VMT) Analysis
- Appendix N- Notice of Preparation (NOP), Initial Study and Comments

SECTION 3: PROJECT DESCRIPTION

This Draft Environmental Impact Report (DEIR) evaluates the potential environmental impacts associated with the implementation of the proposed Industrial Warehouse Building, which proposes to construct up to a 499,714 square-foot industrial building and associated improvements, including loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater facilities, sidewalks, and landscape area on approximately 30.52 acres within the City of Hesperia, California (Project). The Project includes approximately 10,000 square feet of office space, 489,714 square feet of industrial/warehouse space, and 306,000 square feet of landscape improvements. In total, the proposed Project includes 72 loading dock positions, 171 tractor-trailer stalls, and 311 passenger vehicle parking spaces. Project implementation involves a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP).Additionally, the Project requires a Conditional Use Permit to permit the construction and operation of a warehousing and distribution center of a size greater than 200,000 square feet in the Commercial/Industrial Business Park zone.

In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15124, the Project Description provides a clear, comprehensive, and detailed overview of the Project's purpose, location, design, and components. This section is intended to inform the public and responsible agencies of the nature and scope of the Project under review, forming the basis for the environmental analysis contained herein. This Project Description fulfills the CEQA requirements by describing the Project's physical characteristics, proposed land uses, and anticipated construction activities, thereby enabling a thorough assessment of potential environmental effects.

3.1 - Project Location and Setting

3.1.1 - Location

The City of Hesperia is located within the southwestern portion of San Bernardino County. Refer to section 1, *Figure 1- Regional Vicinity*. On a regional basis, the City is accessible via Interstate 15 (I-15), U.S. Federal Highway 395 (US-395), and State Route 18 (SR-18). Jurisdictions surrounding the City of Hesperia include the City of Adelanto to the northwest, Town of Apple Valley to the northeast, City of Victorville to the north, and unincorporated San Bernardino County to the south, east and west.

The Project site is comprised of three (3) parcels (APNs: 0405-072-52, 53, and 55) that total approximately 30.52 acres. The site is bounded by Avenal Street to the north, Palmetto Way to the south, and Amargosa Road to the east. Refer to Section 1, *Figure 2- Aerial Imagery Map*. Specifically, the Project site is in Section 14, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map.

3.1.2 - Existing Conditions

The Project site is currently vacant and undeveloped, characterized by level terrain and a mixture of ruderal/disturbed vegetation and Joshua tree woodland. Vegetation on the site is classified as the Larrea tridentata–Ambrosia dumosa Shrubland Alliance, with dominant species including creosote bush (Larrea tridentata), white bursage (Ambrosia dumosa), Mexican tea (Ephedra trifurca), and Joshua tree (Yucca brevifolia).

A biological survey conducted in November 2025 documented the presence of Joshua trees within the Project site and noted that earlier survey data from April 27, 2022 were outdated (see Appendix C). The 2025 survey provides the most current baseline biological information available at the time of preparation of this EIR.

Surrounding land uses primarily consist of vacant land, with scattered residential, industrial, and utility uses in the vicinity. The site is generally consistent with the developed and transitional land use pattern of the Amargosa Road corridor.

3.1.3 - General Plan Designations and Zoning

The Project site has an existing General Plan Land Use designation of Main Street and Freeway Corridor Specific Plan – Regional Commercial (RC) and a proposed General Plan Land Use Designation of Commercial/ Industrial Business Park (CIBP). Refer to Section 1, *Figure 3 – Existing and Proposed Land Use Designation* and *Figure 4 – Existing and Proposed Zoning*.

Surrounding land use designations and existing conditions are as follows:

- **North**: The City of Victorville is located to the north. Existing uses consist of residential uses and vacant land.
- **South:** General Plan Land Use Designation of Commercial Industrial Business Park (CIBP). Existing uses consist of a Distribution Warehouse.
- **East:** Designated as Regional Commercial (RC). Existing uses consist of a two sided billboard, Amargosa Road and I-15 Freeway.
- **West:** Designated as Regional Commercial (RC). Existing uses consist of a utility building and vacant land.

The Main Street and Freeway Corridor Specific Plan includes all freeway frontages within the city as well as the commercial and industrial areas parallel to the freeway corridor. In addition, it includes the commercial, industrial, and high-density residential properties adjacent to Main Street, as well as the area bounded by Lemon Street, Lime Street, Third Avenue, and I Avenue.

The Main Street/Freeway Corridor Specific Plan contains the majority of the commercially designated areas within the city, as well as the Civic Center complex (north of Main Street and west of Seventh Avenue), and a large portion of the Industrial area located between Santa Fe Avenue East and I Avenue. The goals, objectives, policies and development standards for this area are found in the adopted Main Street and Freeway Corridor Specific Plan.

Table 3.2 General Plan and Zoning Designations for the Surrounding Areas

	Existing Land Use	Land Use/ Zoning Designation (MSFC-SP)
North	Vacant/ Residential	City of Victorville
South	Distribution Warehouse	Commercial Industrial Business Park (CIBP)
East	Amargosa Road/ I-15 Freeway	Regional Commercial (RC)
West	Vacant/ Utility Building	Regional Commercial (RC)

3.2 - Project Overview

3.2.1 - Project Entitlements

Project entitlements such as a Specific Plan Amendment, Conditional Use Permit, and Municipal Separate Storm Sewer System (MS4) Permitare required to ensure a development complies with applicable planning, environmental, and infrastructure regulations. Together, these entitlements provide the legal and regulatory framework necessary for project approval and implementation. The proposed Project includes the following entitlements described below:

- Specific Plan Amendment
- Conditional Use Permit
- Municipal Separate Storm Sewer System (MS4) Permit

3.2.2 - Specific Plan Amendment

A Specific Plan Amendment is required to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP).

3.2.3 - Conditional Use Permit

A Conditional Use Permit is required to permit the construction and operation of a warehousing and distribution center of a size greater than 200,000 square feet in the Commercial/Industrial Business Park zone. A Conditional Use Permit in the City of Hesperia allows for the review of proposed land uses that may otherwise pose compatibility concerns. The CUP process ensures such uses are consistent with the General Plan, the Development Code, and the character of surrounding properties, while mitigating potential impacts through discretionary conditions of approval (Hesperia Municipal Code, §16.12.105).

3.2.4 - MS4 Permit

An MS4 Permit ensures that the project's design and operations comply with regional stormwater quality requirements, minimizing potential impacts to receiving waters and public infrastructure.

Collectively, these entitlements allow the City to review and regulate the proposed project, ensuring environmental protection, orderly development, and consistency with applicable planning policies.

3.3 - Project Characteristics

3.3.1 – Project Trip Generation Comparison

Ganddini Group, Inc. prepared a Trip Generation Comparison Analysis for the proposed Project, dated September 6, 2023 (Appendix L). The purpose of the Trip Generation Comparison Analysis is to evaluate the difference in trips generated by the proposed Project under the Commercial/Industrial Business Park (CIBP) land use designation in comparison to an alternative use that is permitted under the existing Regional Commercial (RC) land use designation.

The Trip Generation Comparison Analysis forecasts the proposed Project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 499,700 square feet of high-cube fulfillment center (non-sort) use. Comparatively, the Trip Generation Comparison Analysis forecasts an alternative commercial retail land use trip generation based on regression equations from the ITE Trip Generation Manual (11th Edition, 2021). ITE land use code 820 (Shopping Center (>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use. Which resulted in more trips than the warehousing alternative.

The proposed Project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE Trip Generation Manual and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD). For the alternative commercial retail land use, it should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Therefore, Ganddini reduced the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative commercial retail land use trip generation in accordance with pass-by rates noted in the ITE Trip Generation Manual (11th Edition, 2021) since Amargosa Road adjacent to the Project site is a low volume roadway and pass-by trips would be minimal.

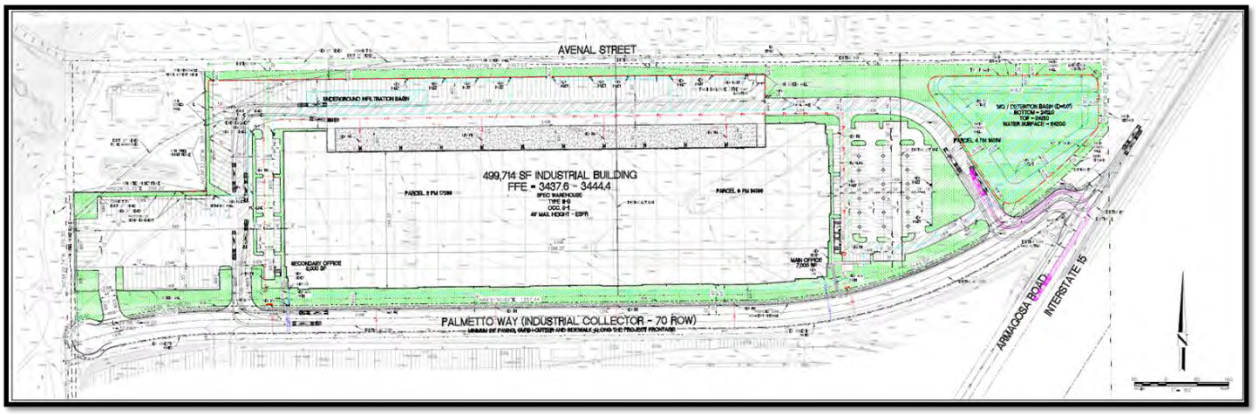
The proposed Project is forecast to generate approximately 1,083 daily Passenger Car Equivalent (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour. Truck trips would amount to 293 total daily trips, 26 am trips and 6 pm trips. The alternative commercial retail land use is forecast to generate a total of approximately 27,280 daily trips, including 1,007 PCE trips during the AM peak hour and 2,149 PCE trips during the PM peak hour without a pass-by trips reduction. Therefore, the proposed Project is forecast to generate approximately 25,505 fewer daily trips compared to a commercial retail land use of equivalent size, including 870 fewer trips during the AM peak hour and 2,035 fewer trips during the PM peak hour.

Based on the Trip Generation Comparison Analysis, the proposed Project consisting of a 499,714 square foot high-cube fulfillment center warehouse building is forecast to generate substantially fewer trips (up to 659% fewer daily trips) compared to an alternative land use composed of 499,850 square feet of commercial retail.

In addition to trip generation forecasts, Ganddini calculated directional distribution patterns for the Project generated trips and the alternative commercial retail land use generated trips. One hundred percent (100%) of the Project inbound, and outbound truck traffic will be distributed from and towards Main Street. Additionally, seventy-five percent (75%) of the Project inbound, and outbound car traffic will be distributed from and towards Main Street and only twenty-five percent (25%) of the Project inbound and outbound car traffic will be distributed from and towards Bear Valley Road. Comparatively, sixty percent (60%) of the alternative commercial retail land use traffic will be distributed towards Main Street and forty percent (40%) of the alternative commercial retail land use traffic will be distributed towards Bear Valley Road.

The Trip Generation Comparison Analysis also includes comparison of the intersection turning movement volumes for the proposed Project and the alternative commercial land use. The alternative commercial retail land use is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed Project for all turning movements at each study area intersection where peak hour trips are expected to be added.

Exhibit 3-4
Preliminary Site Plan



Source: submitted project materials

3.3.2 – General Construction and Grading Assumptions

Construction for the Project is anticipated to begin in October 2026 and continue through September 2027. The construction schedule utilized in the analysis represents a "conservative" scenario, as emission factors for construction activities generally decrease over time due to increasingly stringent emission regulations. The duration of construction activities and associated equipment reflects a reasonable approximation of the expected construction fleet, consistent with CEQA Guidelines.

Construction assumptions are summarized in Table 3.3, including start and end dates and duration of construction activities. The Project is expected to generate construction-related earthwork; however, detailed grading quantities and export assumptions are addressed separately in the Project's technical studies. Table 3.4 presents the construction activity and equipment assumptions used in the analysis.

Table 3.3 Construction Schedule

Construction Activity	Start Date	End Date	Days
Phase 1 (2027 OY)			
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40

Source: Appendix C. Urban Crossroads Air Quality Impact Analysis.

Table 3.4 Construction Equipment

Construction Activity	Equipment	Quantity	Hours Per Day
Phase 1 (2027 OY)			
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	2	8
	Forklifts	5	8
	Generator Sets	2	8
	Tractors/Loaders/Backhoes	5	8
	Welders	2	8
Paving	Pavers	2	8

	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: Appendix C. Urban Crossroads Air Quality Impact Analysis.

3.3.3 –On-Site and Off-Site Improvements

The Project includes improvements along Palmetto Way and Avenal Street, including frontage landscaping and pedestrian improvements. Project landscape conforms to City requirements for industrial uses (Main Street and Freeway Corridor Specific Plan Chapter 11: Industrial Design Standards and Guidelines, Section D). Frontage landscaping includes a variety of trees, shrubs, plants, and land covers within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse building to comprise 19.1% (255,000 SF) of the Project site.

3.3.4 - Site Access, Circulation, and Parking

Regional access to the Project site is provided via I-15 and Amargosa Road. The proposed Project includes three (3) driveways off Palmetto Way. Direct access to the paved tractor-trailer parking area is provided by a 45-foot truck-only driveway at the southwest corner of the site and a 50-foot driveway on the south side of the site for both autos and trucks. Direct access to the paved passenger vehicle parking area is provided by a 50-foot driveway at the southeast corner of the site for both autos and trucks. In total, the proposed Project includes 72 loading dock positions, 171 tractor-trailer stalls, and 311 passenger vehicle parking spaces.

3.3.5 - Utility Improvements

The proposed Project includes a combination of an at grade detention basin and underground infiltration basin to treat stormwater runoff for water quality purposes. Additionally, due to the vacant, undeveloped nature of the Project site, both dry and wet utilities, including domestic water, sanitary sewer, and electricity, need to be extended onto the Project site.

3.3.6 - Operations

A tenant for the Project has not been identified at this time; however, the facility is designed to accommodate approximately 500 to 600 employees. Hours of operation are anticipated to be 24 hours a day, 7 days a week.

3.3.7 - Specific Plan Amendment

The General Plan land use designation of the Project site is Main Street and Freeway Corridor Specific Plan – Regional Commercial (RC) and the zoning designation is Regional Commercial (RC). Implementation of the Project requires a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP). Refer to Section 1, *Figure 3- Existing and Proposed Land Use Designation*.

3.4 - Project Objectives

The following objectives have been identified in order to aid decision makers in their review of the proposed Project, and it's associated environmental impacts.

1. **Develop an Industrial Warehouse and Distribution Facility**

   Construct an industrial warehouse and distribution facility, including ancillary office space and supporting improvements, to accommodate logistics and good movement uses.

2. **Provide Industrial Uses in a Regionally Accessible Location**

   Locate industrial development within the City of Hesperia in proximity to major transportation corridors to support regional and interstate goods movement.

3. **Facilitate Efficient Use of a Vacant Site**

   Develop the approximately 30.52-acre Project site with a use that maximizes its utility while considering site constraints and surrounding land uses.

4. **Ensure Consistency with Local Planning Frameworks**

   Obtain necessary land use entitlements, including a Specific Plan Amendment and Zone Change to align the Project site's land use and zoning with the Commercial/Industrial Business Park designation, facilitating compatibility with surrounding land uses and the City's planning objectives.

5. **Provide Necessary Infrastructure and Site Improvements**

   Incorporate appropriate infrastructure and site design features, including circulation, parking, utilities, stormwater management, and landscaping, to support safe and functional operations.

6. **Support Economic Activity and Employment Opportunities**

   Contribute to the local and regional economy by providing opportunities for employment and supporting industrial and logistics- related business activity.

7. **Accommodate Modern Logistics Operations**

   Design the Project to accommodate contemporary warehouse and distribution operations, including appropriate building size, configuration, and site layout.

3.5 - Intended Uses of this Draft EIR

This Draft EIR is being prepared by the City to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed Project. Pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15367, the City is the lead agency for the proposed Project and has discretionary authority over the proposed Project and Project approvals. The Draft EIR is intended to discuss and disclose the potential Project impacts to the greatest extent

feasible at this time in order to avoid or minimize the need for future environmental documentation of the Project by using current plans, technical studies, and relevant information available. The Draft EIR will be used by the City of Hesperia, interested parties, the general public, and responsible agencies to evaluate the potential environmental impacts of the proposed Project.

SECTION 4: CUMULATIVE IMPACTS

4.1 - Introduction

CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts . . ." The following elements are necessary in an adequate discussion of cumulative impacts, as noted in Sections 15130(b) through 15130(e) of the CEQA Guidelines.

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the Project alone. The discussion should be guided by standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other Project contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:

(1) Either:

(A) A list of relevant past, present, and probable future projects, producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

(B) A summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

(2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resources being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.

(3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

(4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

(5) A specific analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the Project's contribution to any significant cumulative effects.

(c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

(d) Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impact analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or areawide cumulative impacts of the proposed Project have already been adequately addressed, as defined in Section 15152(f), in a certified EIR for that plan.

(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided by Section 15183(j).

4.2 - CUMULATIVE ANALYSIS IN THIS EIR

Cumulative impacts may be discussed in terms of proposed Project impacts, in combination with impacts anticipated for future development (including approved and planned development within the Project area and surrounding affected area), and impacts associated with growth within the region. The geographic area for each impact varies, depending on the nature of the impact, whether it is regional, such as air quality, or local, such as noise.

Quantification can be difficult for cumulative impacts, as it requires speculative estimates of impacts including, but not limited, to the following: the geographic diversity of impacts (impacts of future development may affect different areas); variations in time of impacts; and data for buildout projections may change following subsequent approvals. However, every attempt has been made herein to make sound qualitative judgments of the combined effects of, and relationship between, land uses and potential impacts.

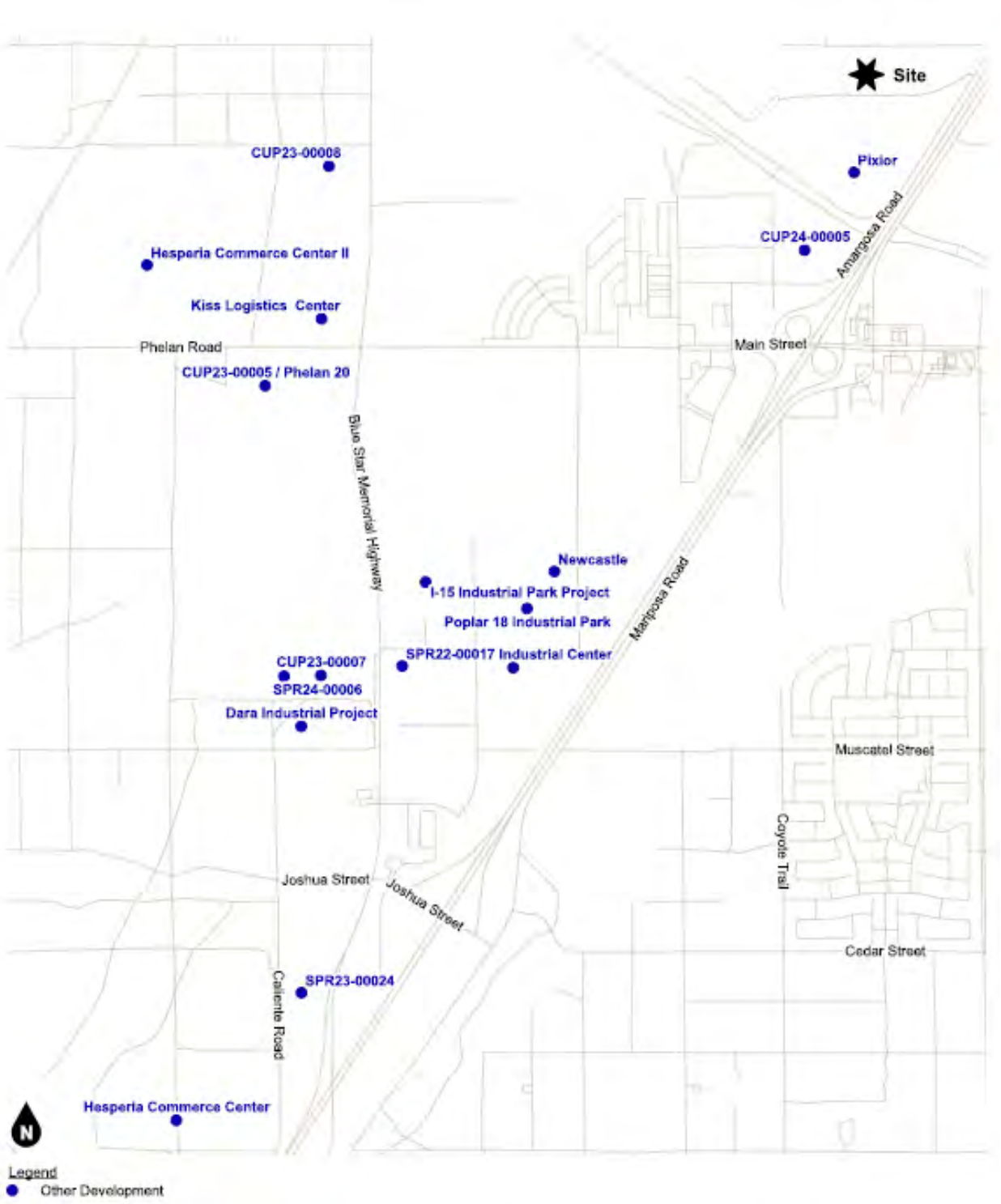
The proposed Project's cumulative impacts were considered in conjunction with other proposed and approved projects within the surrounding area. Table 4.1-1 provides a list of the projects considered in the cumulative analysis, which were compiled based on the *Amargosa and Palmetto High-Cube Warehouse Revised Traffic Impact Analysis* prepared by Ganddini Group, Inc., dated August 21, 2025, Appendix K. Exhibit 4.1-1 shows the general location of these projects. Impact specific cumulative analysis is provided in each environmental resource topic section of this Draft EIR.

Table 4.1-1: Cumulative Projects

Project Name	Land Use[1]	Quantity[2]
CUP23-00008	Fulfillment Center Warehouse	469.979 TSF
Kiss Logistics Center (CUP22-00017)	Fulfillment Center Warehouse	655.468 TSF
Hesperia Commerce Center II (includes CUPR24-0001)	Fulfillment Center Warehouse	3,901.194 TSF
CUP23-00005/Phelan 20	Fulfillment Center Warehouse	419.700 TSF
Pixior (CUPR25-00001)	Fulfillment Center Warehouse	440.000 TSF
CUP24-00005	Commercial Retail	167.664 TSF
Newcastle (CUP22-00004)	Fulfillment Center Warehouse	400.000 TSF

Project Name	Land Use[1]	Quantity[2]
Poplar 18 Industrial Park CUP21-00010)	Fulfillment Center Warehouse	414.700 TSF
I-15 Industrial Park Project (CUP21-00004)	Fulfillment Center Warehouse	1,850.000 TSF
Industrial Center (CUP22-00016/CUP24-0003)	Warehouse	74.924 TSF
SPR22-00017	Fulfillment Center Warehouse	142.634 TSF
SPR24-00006	Fulfillment Center Warehouse	91.569 TSF
Dara Industrial Project (CUP22-00003)	Fulfillment Center Warehouse	750.000 TSF
CUP23-00007	Truck Parking	83 SP
SPR23-00024	Fulfillment Center Warehouse	150.000 TSF
Hesperia Commerce Center (SPR23-00024)	Fulfillment Center Warehouse	3,500.000 TSF
TSF = Thousand Square Feet; SP = spaces.		

Exhibit 4-1: Cumulative Development Location Map



SECTION 5: ENVIRONMENTAL IMPACT ANALYSIS

5.1 - Organization of Issue Areas

The next subsections of the EIR contain a detailed environmental analysis of the existing conditions, project impacts (including direct and indirect, short-term and long-term, and cumulative), recommended mitigation measures, and unavoidable adverse impacts. This EIR analyzes those environmental issue areas as stated in the Notice of Preparation and Comments (Appendix N) and Initial Study (Appendix N) where potentially significant impacts have the potential to occur.

The EIR will examine the following environmental factors outlined in the CEQA Guidelines.

5.01 Air Quality

5.02 Greenhouse Gas Emissions

5.03 Transportation/Traffic

Each environmental issue is addressed in a separate section of the EIR, and is organized into four sections, as follows:

- "Existing Setting" describes the physical conditions that exist at this time and that may influence or affect the issue under investigation.

- "Regulatory Framework"

- "Significance Threshold Criteria" provides the thresholds that are the basis of conclusions of significance, which are primarily the criteria in the CEQA Guidelines Appendix G, Environmental Checklist.

  Major sources used in crafting criteria include the CEQA Guidelines; local, state, federal, or other standards applicable to an impact category; and officially established significance thresholds. "…An ironclad definition of significant effect is not possible because the significance of any activity may vary with the setting." (CEQA Guidelines Section 15064[b]). Principally, "…a substantial, or potentially substantial adverse change in any of the physical conditions within an area affected by the project, including land, air, water, flora, fauna, ambient noise, and objects of historic and aesthetic significance" constitutes a significant impact (CEQA Guidelines Section 15382).

- "Impacts and Mitigation Measures" evaluates the project's environmental impacts in consideration of all phases, including planning, acquisition, development, and operation. This subsection also discusses the potential changes to the existing physical environmental conditions, which may occur if the proposed project is implemented. Evidence, based on factual and scientific data, is presented to show the cause-and-effect relationship between the proposed project and the potential changes in the environment. All of the potential direct and reasonably foreseeable indirect effects are considered. The exact magnitude, duration, extent, frequency, range, or other parameters are ascertained, to the extent possible, to determine their significance.

  The Project's environmental effects are categorized as either "effects found not to be significant" or "potentially significant impact". The "effects found not be significant" category provides a brief

discussion of the reasons that various possible significant effects of the Project were found not to be significant. The "potentially significant" category identifies and focuses on the significant environmental effects of the proposed project. Direct and indirect significant effects of the project on the environment are clearly identified and described, giving due consideration to both the short-term and long-term effects.

- "Mitigation Measures" are project-specific measures that would be required of the project to avoid a significant adverse impact; to minimize a significant adverse impact; to rectify a significant adverse impact by restoration; to reduce or eliminate a significant adverse impact over time by preservation and maintenance operations; or to compensate for the impact by replacing or providing substitute resources or environment.

- The "Level of Significance" presents the significance determination. This statement identifies which impacts would remain after the application of mitigation measures and whether the remaining impacts are or are not considered significant. When impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as "unavoidable significant impacts."

- "Cumulative Impacts" describes potential environmental changes to the existing physical conditions that may occur as a result of the proposed project together with all other reasonably foreseeable, planned and approved future projects producing related or cumulative impacts, as set forth in Section 4.0. A cumulative impact analysis is provided only for those thresholds that result in a less than significant, potentially significant, or significant unavoidable impact. A cumulative impact analysis is not provided for Effects Found Not to be Significant, which result in no project-related impacts.

- "Significant Unavoidable Impacts" describes impacts that would be significant and cannot be feasibly mitigated to less than significant, so would therefore be unavoidable. To approve a project with unavoidable significant impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency is required to balance the benefits of a project against its unavoidable environmental impacts in determining whether to approve the project. If the benefits of a project are found to outweigh the unavoidable adverse environmental effects, the adverse effects may be considered "acceptable" (CEQA Guidelines Section 15093[a]).

5.2 - Level of Significance

Determining the severity of Project impacts is fundamental to achieving the objectives of the California Environmental Quality Act (CEQA). State CEQA Guidelines section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final Focused EIR. If the Draft Focused EIR identifies any significant unmitigated impacts, State CEQA Guidelines section 15093 requires decision makers in approving a Project to adopt a statement of overriding considerations that explains why the benefits of the Project outweigh the adverse environmental consequences identified in the Draft Focused EIR.

The level of significance for each impact examined in this Draft Focused EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the State CEQA Guidelines and checklist; State, federal, and local regulatory schemes;

local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

5.3 - Impact Analysis and Mitigation Measure Format

The format adopted in this Draft Program EIR to present the evaluation of impacts is described and illustrated below.

Summary Heading of Impact

Impact AES-1:	**An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact number identifies the section of the report (AES for Aesthetics, Light, and Glare in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.**

Impact Analysis

A narrative analysis follows the impact statement.

Level of Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AES-1 Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact it is associated with (AES-1 in this example); mitigation measures are numbered sequentially.

Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are:

Code	Environmental Issue
AQ	Air Quality
GHG	Greenhouse Gas Emissions
TRANS	Transportation and Traffic

5.01 - Air Quality

5.01.1 - Introduction

This section evaluates air quality associated with short- and long-term impacts resulting from the buildout of the proposed Project. Information in this section is based primarily on the information obtained from the Air Quality Impact Analysis prepared by Urban Crossroads, dated March 24, 2026 (Appendix A), as well as the Construction and Operational Health Risk Assessment, prepared by Urban Crossroads dated March 24, 2026 (Appendix B).

5.01.2 - Existing Setting

Mojave Desert Air Basin

Geography

The Project site is located in the portion of the City of Hesperia in San Bernardino County that is part of the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The air quality assessment for the Project evaluates emissions impacts associated with short-term construction and long-term operation of the Project. A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the MDAQMD, have created guidelines and requirements to conduct air quality analyses. The MDAQMD's current guidelines, included in its *California Environmental Quality Act and Federal Conformity Guidelines* (August 2016), were adhered to in the assessment of air quality impacts for the Project.

Regional Climate

Air quality in the Project area is not only affected by various emissions sources (mobile, industry, etc.) but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall. The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains within the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and Central California valley regions by mountains (highest elevation is approximately 10,000 feet), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot

desert climate, with portions classified as dry-very hot desert, to indicate that at least three months have maximum average temperatures over 100.4° F.

Snow is common above 5,000 feet in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 feet, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During late summer, moist high-pressure systems from the Pacific collide with rising heated air from desert areas, resulting in brief, high-intensity thunderstorms that can cause high winds and localized flash flooding.

Photochemical Smog

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original or "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Regional Air Quality

Air pollution contributes to a wide variety of adverse health effects. The Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for seven of the most common air pollutants: CO, Pb, O_3, particulate matter (PM_{10} and $PM_{2.5}$), NO_2, and SO_2 which are known as criteria pollutants. The MDAQMD monitors levels of various criteria pollutants at 35 permanent monitoring stations and 2 single-pollutant source Pb air monitoring sites throughout the air district. On January 25, 2024, the California Air Resources Board (CARB) posted the proposed 2023 amendments to the state and national area designations. See Table 5.01-1 for attainment designations for the SCAB.

Table 5.01-1: Attainment Status of Criteria Pollutants in the SCAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassifiable/ Attainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Attainment	Unclassifiable/Attainment
Pb[1]	Attainment	Unclassifiable/Attainment

Regional Air Quality Improvements

MDAQMD rule development has resulted in improvement in air quality for the MDAB. Nearly all control programs developed through the early 2000s relied on (i) the development and application of cleaner technology; (ii) add-on emission controls, and (iii) uniform CEQA review throughout the MDAB. Industrial emission sources have been significantly reduced by this approach and vehicular emissions have been reduced by technologies implemented at the state level by CARB.

The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the MDAB improving over the course of the past decades.

Emissions of O_3, NO_X, and VOCs have been decreasing in the MDAB since 1975 (Appendix A). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the MDAB continue to increase, NO_X and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. O_3 contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1975 and 2023. For 2023, there was an overall increase in exceedance days compared with the 1973 period. O_3 levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding, O3 levels in the MDAB have generally decreased over the last 30 years.

The most recent PM_{10} statistics show a slight improvement. During the period for which data is available, the 24-hour national average concentration for PM_{10} decreased by approximately 18%, from 34.7 microgram per cubic meter (µg/m³) in 1988 to 28.4 µg/m³ in 2023. The 24-hour state annual average concentration for PM10 has decreased by approximately 59%, from 42.4 µg/m³ in 1989 to 17.3 µg/m³ in 2023. Overall, the national and state annual average concentrations have decreased by almost 34% and 29%, respectively. Over the last 50 years, NO_2 values have decreased significantly; the peak 1-hour national and state averages for 2023 are approximately 45% lower than what they were in 1970. NO_2 is formed from NO_X emissions, which also contribute to O_3. As a result, the majority of the future emission control measures would be implemented as part of the overall O_3 control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO_X emissions.

Local Air Quality

Relative to the Project site, the nearest long-term air quality monitoring site for O_3 and PM_{10} was obtained from the MDAQMD Hesperia-Olive Street monitoring station, located approximately 5.08 miles east of the Project site in Hesperia. As data for NO_2 and $PM_{2.5}$ were unavailable at this monitoring station, the next nearest monitoring station, MDAQMD Victorville-Park Avenue located 5.75 miles northeast, was utilized to report air quality data. It should be noted that data from the Victorville-Park Avenue monitoring station was utilized in lieu of the Hesperia-Olive Street monitoring station only in instances where data was not available. Additionally, it should be noted that data for CO was not available at MDAQMD Hesperia-Olive Street nor the nearest alternative monitoring stations.

The most recent three (3) years of data available is shown in Table 5.01-2 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, NO_2, PM_{10}, and P $M_{2.5}$ was obtained

using the CARB iADAM: Air Quality and Data Statistics and the Air Quality and Meteorological Information System (AQMIS). Data for SO_2 has been omitted as attainment is regularly met and few monitoring stations measure SO_2 concentrations. It should be noted that the table is provided for informational purposes.

Table 5.01-2: Project Area Air Quality Monitoring Summary 2022-2024

Pollutant	Standard	Year		
		2022	2023	2024
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.108	0.110	1.121
Maximum Federal 8-Hour Concentration (ppm)		0.090	0.097	0.106
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	11	11	14
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	52	54	70
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	N/A	N/A	N/A
Maximum Federal 8-Hour Concentration	N/A	N/A	N/A	N/A
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.054	0.060	0.057
Maximum State 1-Hour Concentration	>0.180	0.053	0.060	0.057
Annual Federal Standard Design Value		13	11	11
Annual State Standard Design Value		12	12	12
Number of Days Exceeding Federal 1-Hour Standard	>0.100 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	>0.18 ppm	0	0	0
PM_{10}				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 150 µg/m^3	135.0	176.2	78.6
Annual Federal Arithmetic Mean (µg/m^3)		27.2	27.9	28.5
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m^3	0	1	0
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 35 µg/m^3	24.6	25.6	40.7
Maximum State 24- Hour Concentration (µ/m^3)		24.6	25.6	40.7
Annual Federal Arithmetic Mean (µg/m^3)	> 12 µg/m^3	8.9	7.9	9.0
Annual State Arithmetic Mean (µg/m^3)	>12 µg/m^3	9.0	7.9	N/A
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m^3	0	0	1

ppm = Parts Per Million
µg/m^3 = Microgram per Cubic Meter
Source: (*Urban Crossroads, Appendix A, Table 2-5)*

Pollutants Measured

Existing air quality is measured at established MDAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect public health and welfare.

NAAQS and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table: 5.01-3 *Ambient Air Quality Standards.*

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of the Air Quality Assessment, the most recent state and federal standards were updated by CARB on July 16, 2024, and are presented in Table 5.01-3. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the Air District meets the standards set by the U.S. EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the U.S.EPA will designate the area as a maintenance area.

Table: 5.01-3 – Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards[1]**		**National Standards[2]**		
		Concentration[3]	**Method[4]**	**Primary[3,5]**	**Secondary[3,6]**	**Method[7]**
Ozone (O3)[8]	1 Hour	0.09 ppm (180 g/m^3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 g/m^3)		0.070 ppm (137 g/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	g/m^3	Gravimetric or Beta Attenuation	1 g/m^3)	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	g/m^3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	-	-	g/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	1 g/m^3	Gravimetric or Beta Attenuation	9. g/m^3	1 g/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	-	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	-	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		-	-	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 g/m^3)	Gas Phase Chemiluminescence	100 ppb (188 g/m^3)	-	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 g/m^3)		0.053 ppm (100 g/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 g/m^3)	Ultraviolet Fluorescence	75 ppb (196 g/m^3)	-	Ultraviolet Fluorescence: Spectrophotometry (Pararosaniline Method)
	3 Hour	-		-	0.5 ppm (1300 g/m^3)	
	24 Hour	0.04 ppm (105 g/m^3)		0.14 ppm (for certain areas)[11]	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas)[11]	-	
Lead[12,13]	30 Day Average	1. g/m^3	Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1. g/m^3 (for certain areas) [12]	Same as Primary Standard	
	Rolling 3-Month Average	-		.1 g/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	g/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 g/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 g/m^3)	Gas Chromatography			

ppm = parts per million
g/m^3 = micrograms per cubic meter

PM10 – Particulate matter 10 microns in diameter or less
PM2.5 = particulate matter 2.5 microns in diameter or less
Source: California Air Resources Board (7/16/24)

Criteria Pollutants

Air quality regulations were first promulgated with the Federal Clean Air Act (CAA) of 1970. Air quality is defined by ambient air concentrations of seven "criteria air pollutants," which are a group of common air pollutants identified by the U.S. EPA to be of concern with respect to the health and welfare of the general public. Federal and State governments regulate criteria air pollutants by using ambient standards based on criteria regarding the health and/or environmental effects of each pollutant. The seven "criteria" air pollutants defined by the U.S. EPA are: (1) carbon monoxide (CO); (2) sulfur dioxide (SO_2); (3) nitrogen dioxide (NO_2); (4) ozone (O_3); (5) particulate matter less than 10 microns (PM_{10}); (6), fine particulate matter less than 2.5 microns ($PM_{2.5}$); and (7) lead (Pb). Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below in Table 5.01-4:

Table 5.01-4: Criteria Pollutants

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do

Criteria Pollutant	Description	Sources	Health Effects
	are referred to as sulfur oxides (SO_X).		not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
NO_2	NO_2 is a key component of NO_X, which also includes nitric oxide (NO) and nitrous oxide (N_2O). NO_X compounds are primarily produced during combustion processes when nitrogen (N_2) reacts with oxygen (O_2). Both NO and NO_2 serve as precursors in the formation of O_3 and $PM_{2.5}$, making their monitoring crucial for air quality assessments. NO_2, being the more abundant form of NO_X in the atmosphere, has a relatively short lifespan of one to seven days, which enhances its significance as a major air pollutant. As a criteria air pollutant, NO2 poses various health risks, including respiratory issues and increased vulnerability to infections. It also absorbs blue	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

Criteria Pollutant	Description	Sources	Health Effects
	light, imparting a brownish-red hue to the atmosphere and contributing to reduced visibility and smog formation. Given that NO emissions largely convert to NO2, the examination of NOX emissions becomes essential when assessing potential air quality impacts. The concentrations of NO2 are closely related to traffic density, often resulting in higher exposure levels for commuters in heavy traffic compared to what regional monitoring stations may indicate.		In animals, exposure to levels of NO_2 is considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when reactive organic gases (ROG) and NO_X react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub- groups for O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and reside in communities with high O3 levels.

Criteria Pollutant	Description	Sources	Health Effects
			O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NOX release from power plants, automobiles,	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X, organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter.

Criteria Pollutant	Description	Sources	Health Effects
	and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.		The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they	Sources similar to VOCs.	Health effects similar to VOCs.

Criteria Pollutant	Description	Sources	Health Effects
	are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.		
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves.	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger

Criteria Pollutant	Description	Sources	Health Effects
			memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

Potential Impacts to Sensitive Receptors

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered a sensitive receptors.

As per the MDAQMD's *Guidelines*, the following project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors:

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

The Project includes development of a 499,714 square high-cube fulfillment center warehouse building. As such, the potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Receptors in the Project study area are described below. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site. Distance is measured in a straight line from the project boundary to each receptor location.

- R1: Location R1 represents the existing sensitive residence at 13030 Avenal Street, approximately 71 feet north of the Project site. Receptor R1 is placed at the private outdoor living areas (backyards) facing the Project site.
- R2: Location R2 represents the existing sensitive residence at 13164 Avenal Road, approximately 76 feet north of the Project site. Receptor R2 is placed at the private outdoor living areas (backyards) facing the Project site.
- R3: Location R3 represents the existing sensitive residence at 10445 Avenal Street, approximately 1,263 feet east of the Project site. Receptor R3 is placed at the private outdoor living areas (backyards) facing the Project site.
- R4: Location R4 represents the existing sensitive residence at 10122 Mt. Whitney Way, approximately 1,071 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R4 is placed at the residential building façade.
- R5: Location R5 represents the existing sensitive residence at 10376 Wellington Road, approximately 227 feet north of the Project site Receptor R5 is placed at the private outdoor living areas (backyards) facing the Project site.
- R6: Location R6 represents MGA Entertainment, Inc. at 10200 Amargosa Road, approximately 201 feet south of the Project site.

The nearest sensitive receptor is a residence at 13030 Avenal Street, approximately 71 feet north of the Project site.

5.01.3 - Regulatory Framework

U.S. Environmental Protection Agency

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb. The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB. The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non- Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O3 and to adopt a NAAQS for $PM_{2.5}$. As previously mentioned, Table 5.01-1 provides the NAAQS within the MDAB. Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NOX which are emitted as byproducts of the combustion process.

California Air Resources Board (CARB)

CARB, which became part of CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the MDAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS. Local air quality management districts, such as the MDAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

CO "Hot Spot" Analysis

The MDAQMD has not established its own guidelines for CO hotspot analysis. Since the MDAQMD guidelines are based on SCAQMD methodology, it is appropriate to apply the SCAQMD criteria when analyzing CO hotspots within the MDAQMD. A CO hotspot is defined as a localized concentration of CO exceeding the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time the most recent CEQA Air Quality Handbook (1993) was published by SCAQMD, the air basin was designated as non-attainment, requiring projects to perform hotspot analyses to ensure they did not worsen the existing conditions. Over the last two decades, background CO concentrations have been significantly reduced due to regulatory controls on tailpipe emissions, which have culminated in the air basin achieving attainment status for CO.

The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

In 2003, the SCAQMD as part of its AQMP development process, prepared modeling to determine the potential for CO hotspots at the four busiest intersections in the air basin. As summarized in the 2003 AQMP, even at one of the busiest intersections at that time, only 0.7 ppm of CO is attributable to vehicular traffic and the remaining 7.7 ppm were due to ambient background conditions. As shown in Table 2-5 in this report, the background 1-hour and 8-hour concentrations are well below the applicable AAQS. The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

As such, Project-related traffic at any intersections within the Project area would not cause or contribute to a CO hotspot since the background concentrations are low and any contribution from Project traffic would be negligible.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards that went into effect on January 1, 2026. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items:

Nonresidential Mandatory Measures

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitors, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 20% of the peak daily visitors, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. Acceptable bicycle parking facility for Sections 5.106.4.1.2.1, 5.106.4.1.2.2 and 5.106.4.1.2.3 shall be conveniently located near the street and shall meet one of the following:

    1) Covered, lockable enclosures with permanently anchored racks for bicycles;
    2) Lockable bicycle rooms with permanently anchored racks; or
    3) Lockable, permanently anchored bicycle lockers.

Calculations for bicycle parking requirements shall be rounded up to the nearest whole number (5.106.4.1.2).

- Electric Vehicle (EV) charging stations. Construction to provide EV infrastructure and facilitate EV charging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2. EV charging stations and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 EV charging stations – Power allocation method and associated Table 5.106.5.3.6, and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.

- Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:

    1) The minimum requirements in the *California Energy Code* for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the *California Administrative Code*; and
    2) Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);

3) Uplight and Glare ratings as defined in *California Energy Code* (shown in Tables 130.2- A and 130.2-B in Chapter 8)
4) Allowable BUG ratings not exceeding those shown in Table 5.106.8, or
5) Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent (5.106.8).

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section

- 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1)

- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).

- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).

- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

  1) Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
  2) Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  3) Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  4) Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).

- Meters. For new buildings or additions in excess of 50,000 square feet, separate submeters shall be installed as follows (5.303.1.1):

1) For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2) Where separate submeters for individual buildings tenants are unfeasible, for water supplied to the following subsystems:
    a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
    b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
    c. Steam and hot-water boilers with energy input more than 500,000 BTU/h (147 kW).

For excess consumption, a separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day (5.303.1.2).

- Commissioning. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

Air Quality Management Plan

Currently, the NAAQS and CAAQS are exceeded in most parts of the MDAB. The NAAQS, the Project region within the MDAB is in nonattainment for O_3 (8-hour) and PM10. For the CAAQS, the Project region within the MDAB is in nonattainment for O_3 (1-hour and 8-hour) and PM_{10}. In response, the MDAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

5.01.4 - Thresholds of Significance

Appendix G to the State CEQA Guidelines is a sample Initial Study Checklist that includes questions for determining whether impacts related to air quality impacts are significant. These questions reflect the input of planning and environmental professionals at the Governor's Office of Planning and Research and the California Natural Resources Agency, based on input from stakeholder groups and experts in various other governmental agencies, nonprofits, and leading environmental consulting firms.

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The MDAQMD has developed regional significance thresholds for regulated pollutants, shown below in Table 5.01-5. The MDAQMD's *CEQA and Federal Conformity Guidelines* indicate that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

Table 5.01-5: Regional Emissions Significance Thresholds

Pollutant	Threshold
CO	548 lbs/day
NO_X	137 lbs/day
VOC	137 lbs/day
SO_X	137 lbs/day
PM_{10}	82 lbs/day
PM2.5	65 lbs/day

5.01.5 - Models Employed to Analyze Air Quality

CalEEMod

Land uses, such as the Project, affect air quality through construction-source and operational-source emissions. The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including MDAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates; as such, the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix A.

5.01.6 - Project Impacts and Mitigation Measures

Air quality was identified as a topic of concern during the Notice of Preparation (NOP) process and was therefore evaluated in detail in this EIR. Based on the Air Quality Impact Analysis (Appendix A), Project construction and operational emissions would not exceed applicable Mojave Desert Air Quality Management District (MDAQMD) thresholds. Accordingly, all air quality impacts are considered less than significant.

This section discusses potential impacts associated with the Project and provides mitigation measures where necessary.

Impact AQ-(a): Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Impact Statement: Implementation of the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis:

AQMP Consistency Analysis

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with the indicators discussed below.

Consistency Criterion No. 1:

Local land use plans and/or population projections

The proposed Project is located within the City of Hesperia General Plan and has an existing land use designation for "General Commercial" (C2). The C2 land use designation is intended for goods and services of general nature, as well as professional offices that meet both short- and long-term needs of the City's population. The Project includes a General Plan Amendment and Zone Change to Commercial/Industrial Business Park (CIBP). As evaluated in this EIR, the proposed land use is consistent with the City's long-term planning framework and growth projections. The proposed development intensity, including a floor area ratio (FAR) of 0.376, is within the range of development anticipated for industrial and business park uses. The proposed Project site would have an FAR of 0.376, which is in conformance with the maximum allowable FAR of 1.0 under the C2 designation. The Project Applicant proposes land uses that are consistent with development anticipated under the site's existing General Plan designation. The Project would therefore conform to local land use plans.

Consistency Criterion No. 2:

All MDAQMD Rules and Regulations

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), 403 (Fugitive Dust), and 1113 (Architectural Coatings). As previously stated in Section ES.2 of this AQIA, the Project would implement MDAQMD Rule 403 and MDAQMD Rule 1113.

Consistency Criterion No. 3:

Demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards

As substantiated herein, Project construction and operational-source emissions would not exceed applicable MDAQMD regional thresholds. As such, the Project would not have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality for ongoing project operations.

AQMP Consistency Conclusion

The Project would not result in or cause NAAQS or CAAQS violations. The Project's proposed land use designation for the subject site is consistent with the land use designation discussed in the General Plan. Furthermore, the Project would not exceed the applicable regional thresholds and would therefore be considered to have a less than significant impact. The Project is therefore considered to be consistent with the AQMP.

Mitigation Measure

None.

Level of Significance Before Mitigation

Less than Significant impact.

Level of Significance After Mitigation

No Mitigation required.

Impact AQ-(b):	**Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?**

Impact Statement: Implementation of the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Impact Analysis:

Construction Emissions

Construction of each site associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

Grading Activities

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on consultation with the Project team, the Project site would require a net fill of approximately 59,302 cubic yards of soil import (Appendix A).

Off-Site Utility and Infrastructure Improvements

In addition, to support the Project development, there will be paving for off-site improvements associated with roadway construction and utility installation, as well as installation of fire hydrants and street lighting. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the offsite construction areas would have physical constraints on the amount of daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals on Table 5.01-6. As such, no impacts beyond what has already been identified in this report are expected to occur.

Construction Duration

For purposes of the Air Quality Report analysis, Project construction would begin October 2026 and would last through September 2027. The construction schedule utilized in the analysis, shown in Table 5.01-5, represents a "conservative" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*.

Table 5.01-6: Construction Duration

Construction Activity	Start Date	End Date	Days
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40

Source: Appendix A *Air Quality Analysis prepared by* Urban Crossroads.

Construction Equipment

Site-specific construction fleet may vary due to specific Project needs at the time of construction. The associated construction equipment was generally based on CalEEMod defaults. Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 5.01-6 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed.

Table 5.01-7: Construction Equipment Assumptions

Construction Activity	Equipment	Quantity	Hours
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8

	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: Appendix A *Air Quality Analysis prepared by* Urban Crossroads.

On- Road Trips

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and hauling trucks commuting to and from the site. The number of worker, vendor, and hauling trips per phase is presented below in Table 5.01-7. Worker, vendor, and hauling trips are based on CalEEMod defaults. It should be noted that, for vendor trips specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction, as shown in Table 5.01-7.

Table 5.01-8: Construction Trip Assumptions

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	4	0
Grading	25	13	172
Building Construction	210	56	0
Paving	15	10	0
Architectural Coating	42	0	0

Source: Appendix A Air Quality Impact Analysis prepared by Urban Crossroads.

Operational Emissions

Operational activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions are expected from the following primary sources:

- Mobile Source Emissions
- Area Source Emissions
- Energy Source Emissions
- Stationary Source Emissions; and

- On-site Cargo Handling Equipment Emissions.

Mobile Source Emissions

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis (Appendix K)* were utilized in this analysis. Per Appendix K the proposed Project expected to generate approximately 905 total trips per day which include 790 passenger car trips per day and 115 truck trips per day.

Passenger Vehicles

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses. This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty- Trucks (LDT13 & LDT24), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types.

Trucks

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study (Appendix K)*. The trip length function for the proposed industrial building use has been calculated to 30.47 miles for the high-cube fulfillment center warehouse (non-sort) with an assumption of 100% primary trips. This trip length assumption is higher than the CalEEMod defaults for trucks. In order to be consistent with the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study*, trucks are broken down by truck type. The truck fleet mix is estimated by apportioning the trip rates for each truck type based on information provided in the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study.* Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT15 & LHDT2 6)/2-axle, Medium-Heavy-Duty Trucks (MHD)/3-axle, and Heavy-Heavy-Duty Trucks (HHD)/4+-axle. To account for emissions generated by trucks, the fleet mix in Table 3-7 was utilized.

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimate for travel on paved roads was calculated using CalEEMod.

On-Road Mobile Source Emissions Modeling Methodology

EMFAC 2021 and Off-Model Adjustment Factors

On-road mobile source emissions for the Project were estimated using the CARB's EMFAC 2021 model. EMFAC 2021 is the most recent version of EMFAC approved by the U.S. EPA for use in State Implementation Plans (SIPs) and federal transportation conformity determinations, and it remains the standard analytical platform for regional air quality planning in California.

On November 21, 2025, the U.S. EPA approved the use of EMFAC 2021 off-model adjustment factors. These adjustment factors remove the estimated emission benefits that were attributed to California's

Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions, and Heavy Duty Omnibus regulations from EMFAC 2021. Because the preemption waivers for these regulations no longer have effect, these regulations are no longer enforceable. These adjustment factors are multipliers provided by CARB which adjust VOC, NOX, PM10, and PM2.5 emission factors by year, region, and vehicle category to account for the removal of these regulations which are already accounted for in EMFAC 2021. Due to fleet turnover, the adjustment factors result in greater emission increases over the base EMFAC 2021 model outputs in later analysis years.

Although these adjustment factors were approved by EPA primarily for SIP and conformity analysis purposes, they have been incorporated into this analysis in order to provide a conservative estimation of emissions in an evolving regulatory environment.

Application of Adjustment Factors in This Analysis

Because CalEEMod utilizes EMFAC 2021 emission factors to calculate on-road vehicle emissions, adjustment factors were applied to the mobile source emissions outputs for each operational land use based on the vehicle fleet mix. Additionally, adjustment factors were applied to on-road construction emissions, such as those resulting from haul and vendor trucks.

This approach ensures that the emissions estimates are consistent with CARB-approved and EPA-approved planning methodologies, reflect regulatory programs applicable to heavy-duty vehicles that may not be fully captured in the base EMFAC 2021 model, and provide a technically robust basis for evaluating regional and localized air quality impacts.

Conservatism and Applicability Under CEQA

The use of EMFAC 2021 off-model adjustment factors is not required for CEQA purposes. CEQA does not mandate the use of EPA-approved models or SIP-specific adjustment techniques. Instead, CEQA requires a reasonable, good-faith effort to disclose a project's potential environmental impacts using methodologies supported by substantial evidence.

The decision to apply EMFAC 2021 off-model adjustment factors was made to be conservative and precautionary, even though such factors are primarily intended for federal SIP development and transportation conformity analyses. By incorporating these EPA-approved adjustment factors, the analysis avoids understating emissions that could result if certain regulatory impacts were omitted from the base model outputs.

Consistency with SCAQMD CEQA Practice

SCAQMD CEQA guidance recognizes the use of CARB's EMFAC model for estimating on-road mobile source emissions and does not prescribe a single mandatory modeling configuration for CEQA analyses. The application of EMFAC 2021 with CARB-developed, EPA-approved off-model adjustment factors falls within accepted professional practice and reflects a reasonable exercise of technical judgment.

Area Source Emissions

Architectural Coatings

Over a period of time the buildings that are part of this Project would require maintenance and would therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.

Consumer Products

Consumer products include, but are not limited to, detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which, when released in the atmosphere, can react to form O_3 and other photochemically reactive pollutants. The emissions associated with the use of consumer products were calculated based on defaults provided within CalEEMod.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that on October 9, 2021, Governor Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross HP (known as small off-road engines [SOREs]) by January 1, 2024, which is now in effect. However, for purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod, and do not incorporate the emissions reductions that would be realized from implementation of AB 1346.

Energy Source Emissions

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used in almost every project. Criteria pollutant emissions are emitted through the generation of electricity. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity are excluded from the evaluation of significance. Natural gas and electricity usage associated with the Project was calculated by CalEEMod using default parameters.

Stationary Source Emissions

The proposed Project was conservatively assumed to include installation of one (1) 300-hp diesel-powered fire pump and one (1) 700-hp diesel-power emergency generator at the industrial building. The fire pump and emergency generator were estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary diesel powered emergency fire pump and emergency generator were calculated using CalEEMod.

On-Site Cargo Handling Equipment Emissions

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, on-site modeled operational equipment includes up to two (2) 175 hp, natural gas-powered cargo handling equipment – port tractor operating 4 hours a day7 for 365 days of the year.

Operational Emissions Summary

CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. The estimated operational-source emissions without mitigation are summarized in Table 5.01-8. Detailed operation model outputs for the Project are presented in Appendix A. As shown on Table 5.01-8, the Project would not exceed the numerical thresholds of significance established by the MDAQMD for any emissions.

Table 5.01-9: Summary of Peak Operational Emissions

Source	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
Mobile	4.02	11.95	51.42	0.20	13.30	3.56
Area	15.03	0.18	21.73	0.00	0.04	0.03
Energy	0.14	2.55	2.14	0.02	0.19	0.19
Stationary	1.64	4.59	4.18	0.01	0.24	0.24
On- Site Equipment	0.23	0.75	32.89	0.00	0.06	0.05
Maximum Daily Emissions	**21.07**	**20.03**	**112.37**	**0.22**	**13.83**	**4.08**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile	3.70	12.73	38.95	0.18	13.30	3.56
Area	11.46	0.00	0.00	0.00	0.00	0.00
Energy	0.14	2.55	2.14	0.02	0.19	0.19
Stationary	1.64	4.59	4.18	0.01	0.24	0.24
On- Site Equipment	0.23	0.75	32.89	0.00	0.06	0.05
Maximum Daily Emissions	**17.17**	**20.62**	**78.16**	**0.21**	**13.80**	**4.05**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: Appendix A Air Quality Impact Analysis by Urban Crossroads.

The MDAQMD has not established its own guidelines for cumulative impacts. Since the MDAQMD guidelines are based on SCAQMD methodology, it is appropriate to apply the SCAQMD criteria when analyzing cumulative impacts within the MDAQMD. The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects.

The SCAQMD published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution.* In this report the SCAQMD clearly states:

> *"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA*

analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts. Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Consistent with SCAQMD methodology as applied by MDAQMD, projects with emissions below applicable regional thresholds are not considered to make a cumulatively considerable contribution to regional air quality impacts. Conversely, projects that exceed project-specific thresholds are considered cumulatively considerable.

Construction-Source Emission Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions would not result in exceedances of MDAQMD thresholds. Therefore, Project construction-source emissions would be considered less than significant on a Project specific and cumulative basis.

Operational-Source Emission Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project operational-source air pollutant emissions would not result in exceedances of MDAQMD thresholds. Therefore, Project operational-source emissions would be considered less than significant on a Project-specific and cumulative basis.

Mitigation Measure

None.

Level of Significance Before Mitigation

Less than Significant impact.

Level of Significance After Mitigation

No Mitigation required.

Impact AQ-(c): Would the Project expose sensitive receptors to substantial pollution concentrations?

Impact Statement: Implementation of the proposed Project would not result in exposure to sensitive receptors to substantial pollution concentrations.

Impact Analysis:

The Project would have a potentially significant health risk impact if it results in a maximum incremental cancer ris r e issi n T xic Air n a inan s (TA s) 1 in ne illi n and r a chronic & acute ha ard index ha is 1. . n he case he r ec he TA c ncern is diesel particulate matter (DPM) that could be generated by Project construction activities, and on-site and off-site DPM that would result from on-going Project operations. For purposes of this evaluation, a Health Risk Assessment (HRA) has been prepared by Urban Crossroads, Inc. under a separate cover. The results of the *Amargosa and*

Palmetto High-Cube Warehouse Mobile Source Health Risk Assessment (Appendix B) indicate that the Project would not result in any potentially significant health risk impacts from exposure to DPM emissions. Therefore, impacts to sensitive receptors are expected to be less than significant.

Mitigation Measure

None.

Level of Significance Before Mitigation

Less than Significant impact.

Level of Significance After Mitigation

No Mitigation required.

Impact AQ-(d): Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact Statement: Implementation of the proposed Project would not result in an overall increase in odors within the city.

Impact Analysis:

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. With respect to the operation of the gas station, gasoline dispensing activities may also generate odors associated with

gasoline fumes. The gas pumps and underground storage tanks would include requirements based on MDAQMD Rule 461 vapor recovery systems that would control VOC vapor releases during refueling and would minimize driver and employee exposure to gasoline odors and fumes. Thus, gasoline odors are not expected to adversely affect adjacent land uses. While restaurants may result in some odors from the cooking process, these odors are not typically considered objectionable. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The Project would also be required to comply with MDAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the Project would be less than significant and no mitigation is required.

Mitigation Measure

None.

Level of Significance Before Mitigation

Less than Significant impact.

Level of Significance After Mitigation

No Mitigation required.

5.01.7 - Cumulative Impacts

This cumulative impact analysis considers the proposed Project in combination with other past, present, and reasonably foreseeable future development within the Mojave Desert Air Basin (MDAB), which is the appropriate geographic context for evaluating regional air quality impacts due to the basin-wide nature of criteria pollutant formation and transport. The MDAB is currently designated as nonattainment for ozone (O_3) and particulate matter (PM_{10}) under both State and federal standards, and therefore cumulative impacts associated with these pollutants are considered potentially significant.

As described in this section, construction and operational emissions associated with the Project were quantified using CalEEMod (2022) consistent with Mojave Desert Air Quality Management District (MDAQMD) guidance. The analysis conservatively incorporates CARB EMFAC 2021 emission factors with EPA-approved off-model adjustment factors to ensure that emissions are not underestimated in light of evolving regulatory conditions.

The MDAQMD has established regional daily emission thresholds for criteria pollutants (e.g., 137 pounds per day for NO_x and VOC, 82 pounds per day for PM_{10}, and 65 pounds per day for $PM_{2.5}$), which are used to evaluate both project-specific and cumulative impacts. Consistent with SCAQMD methodology, which is applied by MDAQMD, projects that do not exceed these thresholds are not considered to make a cumulatively considerable contribution to regional air quality impacts because the thresholds are designed to represent the level at which an individual project's emissions would interfere with attainment of air quality standards.

Construction activities associated with the Project would generate temporary emissions of criteria pollutants from site preparation, grading, building construction, paving, and architectural coating activities. However, as demonstrated in the Project-level analysis, construction emissions would not exceed applicable MDAQMD daily thresholds. In addition, construction emissions would be short-term

and temporary, and would comply with applicable MDAQMD rules, including Rule 403 (Fugitive Dust Control). Therefore, construction-related emissions would not represent a cumulatively considerable contribution to regional air quality impacts.

Operational emissions associated with the Project would result primarily from mobile sources (i.e., vehicle trips), as well as area, energy, stationary, and on-site equipment sources. The Project is anticipated to generate approximately 905 daily vehicle trips, including passenger vehicles and truck traffic. As shown in Table 5.01-8, maximum daily operational emissions would be substantially below all applicable MDAQMD thresholds for all criteria pollutants in both summer and winter conditions. Because the Project's emissions do not exceed the established thresholds of significance, the Project would not result in a cumulatively considerable net increase in criteria pollutants for which the MDAB is in nonattainment.

With respect to localized impacts, including exposure of sensitive receptors to toxic air contaminants (TACs), the Project-specific Health Risk Assessment demonstrates that cancer risk and hazard index values would remain below applicable significance thresholds. Because cumulative health risk impacts are driven by facility-wide or regional exposure conditions and the Project's contribution is below applicable thresholds, the Project would not make a cumulatively considerable contribution to TAC-related health risks.

In addition, the Project would be required to comply with all applicable federal, State, and local regulations, including the Clean Air Act, CARB regulations, MDAQMD rules, and applicable Air Quality Management Plans (AQMPs), which are specifically designed to reduce emissions and achieve attainment of ambient air quality standards. Regional air quality planning efforts account for projected growth within the MDAB, and the Project is consistent with the land use assumptions and growth projections underlying these plans.

Although cumulative air quality impacts in the MDAB are significant due to existing nonattainment conditions, the Project's contribution would be below established significance thresholds, consistent with regional planning assumptions, and subject to applicable regulatory controls. Therefore, the Project would not make a cumulatively considerable contribution to significant cumulative air quality impacts. Cumulative impacts related to air quality would be less than significant, and no mitigation is required. This conclusion is consistent with CEQA Guidelines Section 15064(h)(1), which provides that a project's contribution to a cumulative impact is not cumulatively considerable if it remains below an applicable threshold of significance.

5.02 - Greenhouse Gas Emissions

5.02.1 - Introduction

This section describes the existing greenhouse gas (GHG) emissions setting and potential effects from Project implementation. A Greenhouse Gas Analysis was prepared by Urban Crossroads, dated March 24, 2026, for the Project and is included as Appendix G of this DEIR.

5.02.2 - Environmental Setting

Introduction to Global Climate Change

Global Climate Change (GCC) is a change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in the Greenhouse Gas Analysis conducted by Urban Crossroads, (Appendix G) cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, the project's Greenhouse Gas Analysis will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

Global Climate Change Defined

As previously mentioned, GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

Greenhouse Gases

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Table 5.02-1, Greenhouse Gases, includes a description of greenhouse gases including their sources and health effects.

Table 5.02-1: Greenhouse Gases

GHGs	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. Climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop would continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it would eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up).	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid- 1700s, the sort of human activity that increases GHG	CO_2 is emitted from natural and manmade sources. Natural sources include: the	Outdoor levels of CO_2 are not high enough to result in negative health

GHGs	Description	Sources	Health Effects
	emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.	decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.	effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period.
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to elevated levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.

GHGs	Description	Sources	Health Effects
		include fossil-fuel combustion and biomass burning.	
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction.	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage).
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs would remain in the	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

GHGs	Description	Sources	Health Effects
		atmosphere for over 100 years.	
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have exceptionally long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the Magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF3 has a 100-year GWP of 17,200.	NF_3 is used in Industrial processes and is produced in The manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis.

Source: Appendix G *Greenhouse Gas Analysis prepared by* Urban Crossroads.

For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

GHGs have varying Global Warming Potential (GWP) values. GWP of GHG indicates the amount of warming a gas causes over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 5.02-2 below.

Table 5.02-2: Global Warming Potential and Atmospheric Lifetime of Select GHGs

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)	
		2nd Assessment Report	6th Assessment Report
CO_2	Multiple	1	1
CH_4	11.8	21	28
N_2O	109	310	273
HFC-23	228	11,700	14,600
HFC-134a	14	1,300	1,526
HFC-152a	1.6	140	164
SF_6	3,200	23,900	25,200

Source: IPCC Second Assessment Report, 1995 and IPCC Sixth Assessment Report, 2023

GHG EMISSIONS INVENTORY

Global

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2021. Based on the latest available data, the sum of these emissions totaled approximately 28,272,940 gigagram (Gg) CO_2e^2 as summarized on Table 5.02-3.

Table 5.02-3: Top GHG Producing Countries and The European Union

Emitting Countries	GHG Emissions (Gg CO_2e)
China	12,300,200
United States	6,340,228
European Union (27-member countries)	3,468,394
India	2,839,425
Russian Federation	2,156,599
Japan	1,168,094
Total	**28,272,940**

Source: Appendix G *Greenhouse Gas Analysis prepared by* Urban Crossroads.

United States

As noted in Table 5.02-3, the United States, as a single country, was the number two producer of GHG emissions in 2021.

State of California

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States (U.S.) emissions inventory total. The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2024 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2022 GHG emissions period, California emitted an average 371.1 million metric tons of CO_2e per year ($MMTCO_2e/yr$) or 371,100 Gg CO_2e (5.85% of the total United States GHG emissions).

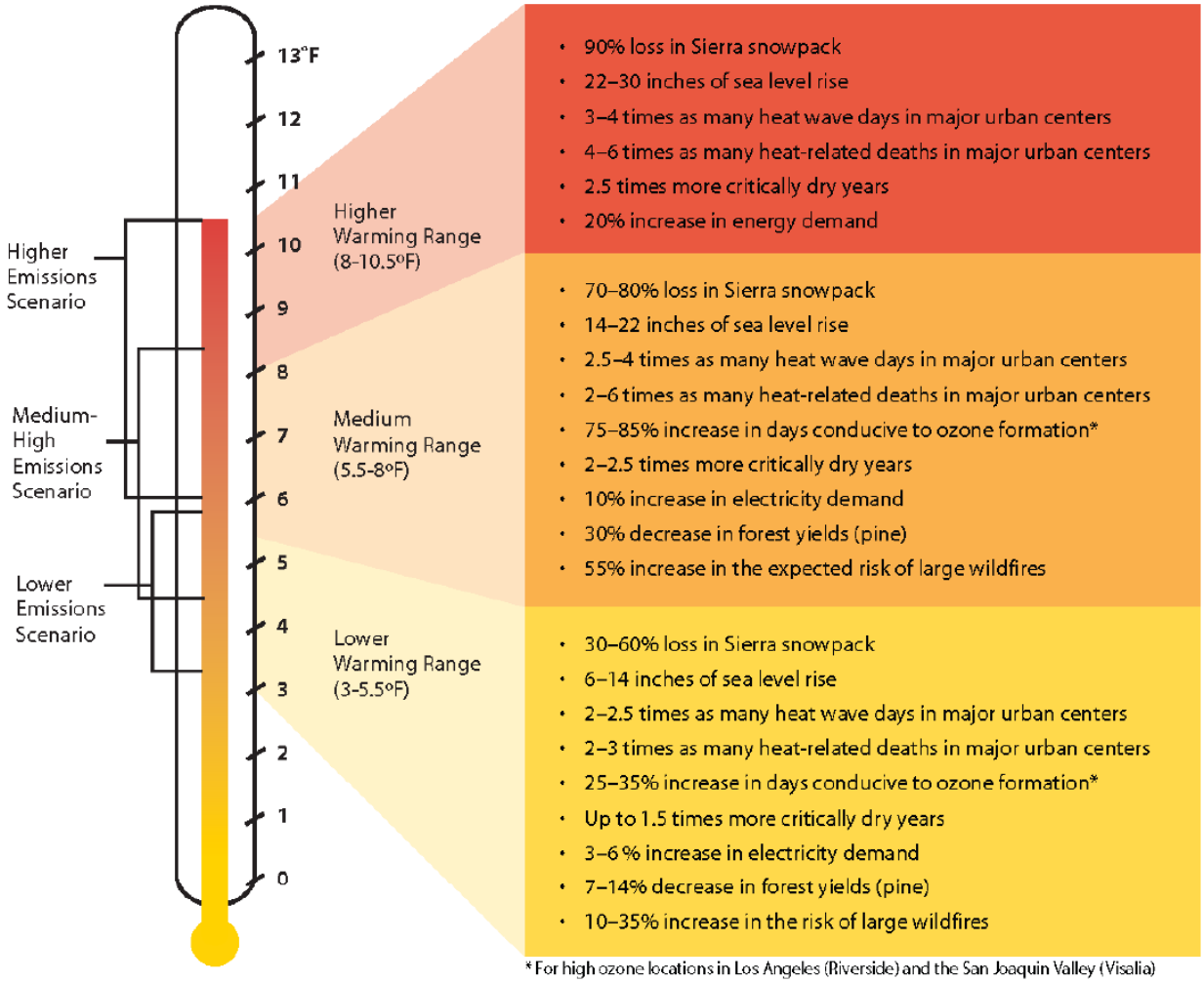
Effects of Climate Change in California

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. According to The Our *Changing Climate: Assessing the Risks to California by the California Climate Change Center*, large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. Exhibit 5.02-1, Summary of Projected Global Warming Impact, presents the potential impacts of global warming.

Exhibit 5.02-1: Summary of Projected Global Warming Impact, 2070-2099 (As compared with 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009, (Exhibit derived from Project Greenhouse Gas Analysis, Urban Crossroads, Appendix N)

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the

ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

Agriculture

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks would not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

Rising Sea Levels

Although not relevant to the Project area, rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the State's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

5.02.3 - Regulatory Framework

International Regulations

Intergovernmental Panel on Climate Change (IPCC)

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the Intergovernmental Panel on Climate Change (IPCC) to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nation's Framework Convention on Climate Change (UNFCCC)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the UNFCCC, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

International Climate Change Treaties

The Kyoto Protocol is an international agreement linked to the UNFCCC. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five- year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the UN Climate Change Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre- industrial levels, subject to a review in 2015. The Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings gradually gained consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact

on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they would "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly would not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a).

Following President Biden's day one executive order, the United States officially rejoined the landmark Paris Agreement on February 19, 2021, positioning the country to once again be part of the global climate solution. Meanwhile, city, state, business, and civic leaders across the country and around the world have been ramping up efforts to drive the clean energy advances needed to meet the goals of the agreement and put the brakes on dangerous climate change.

National Regulations

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment

In Massachusetts v. Environmental Protection Agency 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (Supreme Court) found that four GHGs, including CO2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO2, CH4, N2O, HFCs, PFCs, and SF6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in "Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings.

Clean Vehicles

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA, and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium- duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO2 level solely through fuel economy improvements. Together, these standards would cut CO2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of HDT and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and

diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10% reduction in fuel consumption and CO2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which declared that the MY (Model Year) 2022-2025 GHG standards are not appropriate and should be revised (30). This Final Determination serves to initiate a notice to further consider appropriate standards for MY 2022- 2025 light-duty vehicles. On August 2, 2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend existing Corporate Average Fuel Economy (CAFE) and tailpipe CO2 standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO2 emissions standards by 1.5% each year through model year 2026 (31). On December 21, 2021, after reviewing all the public comments submitted on NHTSA's April 2021 Notice of Proposed Rulemaking, NHTSA finalizes the CAFE Preemption rulemaking to withdraw its portions of the so-called SAFE I Rule. The final rule concludes that the SAFE I Rule overstepped the agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. The final rule ensures that the SAFE I Rule will no longer form an improper barrier to states exploring creative solutions to address their local communities' environmental and public health challenges.

On March 31, 2022, NHTSA finalized CAFE standards for MY 2024-2026. The standards for passenger cars and light trucks for MYs 2024-2025 were increased at a rate of 8% per year and then increased at a rate of 10% per year for MY 2026 vehicles. NHTSA currently projects that the revised standards would require an industry fleet-wide average of roughly 49 mpg in MY 2026 and would reduce average fuel outlays over the lifetimes of affected vehicles that provide consumers hundreds of dollars in net savings. These standards are directly responsive to the agency's statutory mandate to improve energy conservation and reduce the nation's energy dependence on foreign sources.

Mandatory Reporting of GHGs

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

State

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation but also provide GHG reductions. This section describes the major provisions of the legislation at the State level. State regulations

play a critical role in shaping regional Air Quality Management Districts, such as the South Coast Air Quality Management District (SCAQMD), by providing the legal framework, authority, and policy direction for its air quality management programs.

California Assembly Bill No. 32 (AB 32)

The California State Legislature enacted AB 32, which required that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met[4]). GHGs as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, NF_3, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

California Air Resources Board (CARB) Scoping Plan Update

In November 2017, CARB released the Final 2017 Scoping Plan Update (2017 Scoping Plan), which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH4 emissions from agricultural and other wastes. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO2e for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030.

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.

- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

The *2017 Scoping Plan* acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO2e (MTCO2e) or less per capita by 2030 and 2 MTCO2e or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the 2017 Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on- site design features and MMs that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 MTCO2e per year (MTCO2e/yr), indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050.

Cap-And-Trade Program

The 2017 Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25,000 MTCO2e/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 MTCO2e/yr "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each MTCO2e of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year.

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the First Update to the Climate Change Scoping Plan:

"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."

The Cap-and-Trade Program covers approximately 80% of California's GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

The Sustainable Communities and Climate Protection Act Of 2008 (Sb 375)

On September 30, 2008, SB 375 was signed by the Governor. According to SB 375, the transportation sector, which emits over 40% of the total GHG emissions in California. SB 375 states, "Without improved land use and is the largest contributor of GHG emissions transportation policy, California would not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations (MPOs) to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375 requires Metropolitan Planning Organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account

the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the MMs required by an applicable prior environmental document.

AB 1493 - Pavley Fuel Efficiency Standards

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MY 2017 through 2025. The regulation will reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules will clean up gasoline and diesel powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid EV and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California. On March 9, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards for cars and light trucks, which other states can also adopt and enforce. With this authority restored, EPA will continue partnering with states to advance the next generation of clean vehicle technologies.

Clean Energy and Pollution Reduction Act Of 2015 (Sb 350)

In October 2015, the legislature approved, and Governor Jerry Brown signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

Senate Bill No. 32 (SB 32)/AB 197

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature.

SB 97 AND THE CEQA GUIDELINES UPDATE

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)."

In 2012, Public Resources Code Section 21083.05 was amended to state:

"The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code."

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the *CEQA Guidelines* for implementing CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 15064.4 was added the *CEQA Guidelines* and states that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively insignificant compared to statewide, national, or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

Executive Order S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that would stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector, and do not apply to the Project.

Executive Order S-01-07 (LCFS)

Governor Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. CARB adopted the LCFS on April 23, 2009.

After a series of legal changes, in order to address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. On November 16, 2015, the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

In 2018, CARB approved amendments to the regulation, which included strengthening the carbon intensity benchmarks through 2030 in compliance with the SB 32 GHG emissions reduction target for 2030. The amendments included crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector. This is provided for informational purposes only and does not apply to this Project.

Executive Order S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the 2009 California Climate Adaptation Strategy (CNRA 2009) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying, and exploring strategies to adapt to climate change, and specifying direction for future research. This is provided for informational purposes only and does not apply to this Project.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the *2017 Scoping Plan* to express the 2030 target in terms of $MMTCO_2e$. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable as to local governments and the private sector and does not apply to this Project. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order B-55-18 And Sb 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Previously, 25% of retail sales of electricity are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55- 18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California EPA (CalEPA), the California Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal which does not apply to local governments and the private sector and does not apply to this Project.

CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 CCR Sections 1601 Et Seq. – Appliance Efficiency Regulations

The Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non- federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles (RV) or other mobile equipment (CEC 2012).

Title 24 Energy Efficiency Standards and California Green Building Standards

The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods.

Title 24 CCR Part 11 – California Green Building Standards Code

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards that went into effect on January 1, 2026. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items:

Nonresidential Mandatory Measures

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. Acceptable bicycle parking facility for Sections 5.106.4.1.2.1, 5.106.4.1.2.2 and 5.106.4.1.2.3 shall be conveniently located near the street and shall meet one of the following:

    1) Covered, lockable enclosures with permanently anchored racks for bicycles;

    2) Lockable bicycle rooms with permanently anchored racks; or

    3) Lockable, permanently anchored bicycle lockers.

Calculations for bicycle parking requirements shall be rounded up to the nearest whole

number (5.106.4.1.2).

- Electric Vehicle (EV) charging stations. Construction to provide EV infrastructure and facilitate EV charging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2. EV charging stations and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 EV charging stations – Power allocation method and associated Table 5.106.5.3.6, and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.
- Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:

    1) The minimum requirements in the *California Energy Code* for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the *California Administrative Code*; and

    2) Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);

3) Uplight and Glare ratings as defined in *California Energy Code* (shown in Tables 130.2-A and 130.2-B in Chapter 8)

4) Allowable BUG ratings not exceeding those shown in Table 5.106.8, or

5) Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent (5.106.8).

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section
- 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1)
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

    1) Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).

    2) Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).

    3) Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).

    4) Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Meters. For new buildings or additions in excess of 50,000 square feet, separate submeters shall be installed as follows (5.303.1.1):

1) For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2) Where separate submeters for individual buildings tenants are unfeasible, for water supplied to the following subsystems:
    a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
    b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
    c. Steam and hot-water boilers with energy input more than 500,000 BTU/h (147 kW).

For excess consumption, a separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day (5.303.1.2).

- Commissioning. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

REGIONAL REGULATIONS

The County is located within the SCAB, which is under the jurisdiction of the SCAQMD. SCAQMD operates within a regulatory structure set by the state, enforcing rules and implementing air quality improvement programs based on California's stringent environmental standards.

South Coast Air Quality Management District (SCAQMD)

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency, if they are the only agency having discretionary approval for the project, and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, which could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The proposed Project relies on SCAQMD's Tier 4 threshold as follows:

- Tier 4 has the following options:

- Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage; this percentage is currently undefined.
- Option 2: Early implementation of applicable AB 32 Scoping Plan measures
- Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$ per SP per year for projects and 6.6 $MTCO_2e$ per SP per year for plans;
- Option 3, 2035 target: 3.0 $MTCO_2e$ per SP per year for projects and 4.1 $MTCO_2e$ per SP per year for plans

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 4 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO2 concentrations at 450 ppm, thus stabilizing global climate.

LOCAL REGULATIONS

City of Hesperia General Plan

The City of Hesperia adopted its General Plan in 2010, and the most recent General Plan Amendments were adopted in 2025.[1] The General Plan provides goals and policies to guide decision-makers and the community toward its vision to create a better Hesperia for everyone. A general plan is also a long-term document, projecting conditions and needs 20 to 25 years into the future to inform and direct shorter-term decisions such as annual budgeting, improvements to public facilities, partnerships to spur economic growth, and investments to enhance safety. The plan includes policies and programs within various elements and technical appendices that reduce GHG emissions in the City.

The current General Plan reduces GHG emissions through planning measures, such as limiting water consumption, sufficient bicycle and pedestrian routes, and reducing energy consumption. The City's applicable GHG goals and policies from the Health and Safety Element are listed below.

HUMAN HEALTH HAZARDS POLICIES

Goal SF-6:	***A resilient community able to adapt to climate change hazards.***
Policy SF-6.1	Promote water conservation measures in all public and private development.
Policy SF-6.2	Work with regional water providers to implement extensive water conservation measures and ensure sustainable water supplies, including for fire suppression needs.
Policy SF-6.3	Support local agencies to promote public awareness on resilience initiatives related to poor air quality, drought, extreme heat, severe weather, water conservation, and human health hazards.
Policy SF-6.4	Coordinate with the Victor Valley Transit Authority to increase shading and use of heat-mitigating materials on pedestrian walkways and at transit stops.

[1] City of Hesperia General Plan. Website: https://www.hesperiaca.gov/409/Hesperia-General-Plan Accessed October 4, 2025.

Policy SF-6.5 Develop and maintain an Extreme Heat Action Plan in accordance with State guidance.

Policy SF-6.6 Promote the use of drought-tolerant green infrastructure, including landscaped areas, as part of cooling strategies in public and private spaces.

Policy SF-6.7 Encourage local businesses to develop workplace heat safety protocols and provide training for employers and employees in heat-exposed occupations.

Policy SF- 6.8 Improve the resiliency of City-owned structures to severe weather events and support homeowners and business owners to improve the resilience of their buildings and properties through retrofits, weatherization, and other improvements.

Policy SF- 6.9 Coordinate with the City's utility service providers to upgrade, harden, and/or underground their facilities and infrastructure in Hesperia, to improve their survivability of a natural or human-caused hazard event.

Policy SF- 6.10 Participate in regional partnerships that support increased community resilience, such as the Inland Southern California Climate Collaborative.

Policy SF- 6.11 Coordinate with the San Bernardino County Department of Public Health and healthcare providers to support free or reduced-cost medical care for low-resourced households.

Policy SF- 6.12 Coordinate with local agencies, healthcare providers, and community-based organizations that provide resources to help residents respond to poor air quality events (e.g., transportation to resilience centers and supply free N95 masks).

Policy SF- 6.13 Work with local contractors and community-based organizations to help low-income households and community service providers obtain or upgrade indoor air filtration systems.

BICYLE AND PEDESTRIAN ROUTES POLICIES

Goal HC-2 **Ample parks, trails, community facilities, and services that meet community needs, are well maintained, distributed equitably, and provide opportunities for active living.**

Policy HC-2.1 Create an integrated system of bike, trail, and pedestrian routes that connect neighborhoods, corridors, recreation, and other major facilities.

Policy HC- 2.2 Collaborate with the Hesperia Recreation and Park District to assess development impact fees of five acres of parkland for every 1,000 new residents served by new residential developments.

Policy HC- 2.3 Work with the Hesperia Recreation and Park District to provide an appropriately designed public park within a 15-minute walk of all homes to ensure equitable access from all neighborhoods.

Policy HC- 2.4 Support partnerships that provide active and passive recreational activities that are affordable and accessible and sensitive to the needs of different ages and abilities.

Policy HC- 2.5 Work with local schools in the community to ensure that all public schools have safe and walkable routes to school that can encourage youth to be physically active.

Policy HC-2.6 Ensure that the function and design of parks, bicycle routes, and sidewalks meet the needs of residents of different age groups and abilities, and also serve northern and southern Hesperia.

ENERGY EFFICIENCY AND ENERGY CONSERVATION POLICIES

Goal CN-6 **Provide programs and incentives to encourage residents, businesses and developers to reduce consumption and efficiently use energy resources.**

Policy CN-6.1 Develop a green building program in the City to educate the development community and promote the conservation of natural resources.

Policy CN-6.2 Encourage the use of green building standards and Leadership in Energy and Environmental Design (LEED) or similar programs in both private and public projects.

Policy CN-6.3 Provide incentives like technical assistance and low-interest loans for projects that are energy efficient and contain energy conservation measures.

Policy CN-6.4 Educate the public about energy conservation techniques.

Policy CN-6.5 Coordinate with the local energy provider in developing policies and procedures to reduce energy consumption in existing and future developments.

Policy CN-6.6 Encourage residents and businesses to utilize the incentives provided by the local energy providers to retrofit their buildings and businesses for energy efficiency and conservation.

Policy CN-6.7 Continue the existing recycling program and utilization of the material recovery facility program while exploring additional methods of reducing waste.

GLOBAL CLIMATE CHANGE POLICIES

Goal CN-7 **Develop, promote and implement policies to reduce and limit Greenhouse Gas Emissions.**

Policy CN-7.1 Coordinate with the Regional Councils of Government in developing appropriate regional climate action policies.

Policy CN-7.2 In conjunction with regional councils of government, prepare and implement a city climate action plan.

Policy CN-7.3 Coordinate with neighboring cities and public jurisdictions in the preservation of air quality resources.

Policy CN-7.4	Promote the utilization of alternative energy resources such as wind and solar in new development.
Policy CN-7.5	Promote the utilization of environmentally sensitive construction materials to limit impacts on the ozone, global climate change and mineral resources.
Policy CN-7.6	Preserve land resources for the utilization of energy resources, including wind and solar energy resources.
Policy CN-7.7	Promote energy conservation through site layout, building design, natural light and efficient mechanical and electrical products in development.
Policy CN-7.8	Continue the existing recycling program and utilization of the material recovery facility program while exploring additional methods of reducing waste.
Policy CN-7.9	Promote sustainable principles in development that conserves such natural resources as air quality and energy resources.

City of Hesperia Climate Action Plan

On July 20, 2010, the City of Hesperia adopted the CAP, which provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate. The CAP recommends GHG emissions targets that are consistent with the reduction targets of the State of California and presents a number of strategies that will make it possible for the City to meet the recommended targets. Strategy CAP-1 specifies that "projects that are consistent with this CAP could result in less than significant impacts regarding climate change. This is because emissions from these projects are generally accounted for in this CAP and would be consistent with this CAP reduction target. To be consistent with this CAP, CEQA projects must implement the applicable CAP implementation strategies listed in Section 4.2."

Although Project consistency with the CAP is demonstrated in the following subsections for informational purposes, the CAP is not relied upon as the sole basis for determining the significance of GHG emissions. The CAP was adopted in 2010 and has not been updated to reflect subsequent changes in state law, including SB 32, updated CARB Scoping Plans, and more recent GHG reduction targets. As a result, while CAP consistency is informative, reliance on the CAP alone would not provide an adequate or current basis for determining GHG significance under CEQA.

5.02.4 - Thresholds of Significance

Appendix G to the State CEQA Guidelines is a sample Initial Study Checklist that includes questions for determining whether impacts related to GHG emissions and energy consumption are significant. These questions reflect the input of planning and environmental professionals at the Governor's Office of Planning and Research and the California Natural Resources Agency, based on input from stakeholder groups and experts in various other governmental agencies, nonprofits, and leading environmental consulting firms. They also reflect the requirements of laws other than CEQA, such as AB 32 and SB 32. As a result, many lead agencies derive their significance criteria from the questions posed in Appendix G. The County has chosen to do for this Project. Thus, the proposed Project would have significant effects if the Project would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

b) Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Section 15064.4(b) of the State CEQA Guidelines' 2018 amendments for GHG emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- **Consideration No. 1**: The extent to which the Project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration No. 2**: Whether the Project emissions exceed a threshold of significance that the lead agency determines applies to the Project.
- **Consideration No. 3**: The extent to which the Project complies with regulations or requirements adopted to implement a Statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the Project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular Project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the Project. In determining the significance of impacts, the lead agency may consider a Project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the Project's incremental contribution to climate change and its conclusion that the Project's incremental contribution is not cumulatively considerable.

5.02.5 - Methodology

MODELS EMPLOYED TO ANALYZE GHG EMISSIONS

California Emissions Estimator Model (CalEEmod)

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including MDAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates; as such, the latest version available at the time of the GHG report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity for the Project are provided in Appendix G. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water, refrigerants, stationary and on-site cargo equipment.

Construction Emissions

The Project involves construction activities associated with site preparation, grading, building construction, paving, and architectural coating. Construction activities associated with the Project would result in emissions of CO_2 and CH_4. The Air Quality Impact Analysis Report (Appendix A) contains detailed information regarding Project construction activities. As discussed in the Appendix A, Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

Construction Duration

The Project will be constructed in one phase. For purposes of analysis, Project construction is assumed to begin in October 2026 and continue through September 2027. The construction schedule utilized in the analysis, shown in Table 5.04-4, represents a "conservative" analysis scenario. That is, should construction occur any time after the assumed dates, construction emissions would be reduced when compared to the levels presented here. This is due to the decrease in emission factors for construction equipment over time, and increasing stringency in emissions regulations. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per the CEQA Guidelines.

Table 5.02-4: Construction Duration

Construction Activity	Start Date	End Date	Days
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40

Source: Appendix G *Greenhouse Gas Analysis prepared by* Urban Crossroads.

Construction Equipment

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 5.04-5 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the County code.

Table 5.02-5: Construction Equipment Assumptions

Construction Activity	Equipment	Quantity	Hours
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8

	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: Appendix G *Greenhouse Gas Analysis prepared by* Urban Crossroads.

Construction Emissions Summary

For construction phase emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the MDAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then adding that number to the annual operational phase GHG emissions. As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions from each phase are presented in Table 5.02-6.

Table 5.02-6: Amortized Annual Construction Emissions

Year	CO_2T	CH_4	N_2O	R	Total CO_2e
2026	472.48	0.01	0.04	0.28	485.36
2027	569.20	0.01	0.03	0.45	578.20
Total	**1,041.68**	**0.02**	**0.07**	**0.73**	**1,063.57**
Amortized	**34.72**	**0.00**	**0.00**	**0.02**	**35.45**

Source: Appendix G *Greenhouse Gas Analysis prepared by* Urban Crossroads.

Operational Emissions

Operational activities associated with the Project will result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Area Source Emissions

- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions

AREA SOURCE EMISSIONS

ARCHITECTURAL COATING

Over a period of time the buildings that are part of this Project will require maintenance and will therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024.

ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Greenhouse gases (GHGs) are emitted from buildings primarily through the use of electricity and natural gas. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered.

MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis were utilized in the analysis.

ON-SITE CARGO HANDLING EQUIPMENT EMISSIONS

It is common for warehouse buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to two (2) 200 horsepower (hp), compressed natural gas or gasoline-powered tractors/loaders/backhoes operating at 4 hours a day8 for 365 days of the year.

EMISSIONS SUMMARY

Impacts Without Mitigation

The estimated Project-related GHG emissions are summarized in Table 5.02-7. Detailed operation model outputs for the Project are presented in Appendix N. As shown on Table 5.02-7, the Project would result in 4,257.17 MTCO2e/yr.

Table 5.02-7: Project GHG Emissions

Source	Emissions (MT/yr)				
	CO_2T	CH_4	N_2O	R	Total CO_2E
Annual construction emissions (amortized 30 yrs)	34.72	0.00	0.00	0.02	35.45
Mobile Source	2,724.22	0.05	0.23	13.17	2,807.59
Area Source	7.30	0.00	0.00	0.00	7.32
Energy Source	885.55	0.08	0.01	0.00	889.18
Water Source	145.66	3.77	0.09	0.00	266.89
Waste Source	41.91	4.19	0.00	0.00	146.64
Stationary	19.04	0.00	0.00	0.00	19.10
On-Site Equipment Source	0.00	0.00	0.00	0.00	94.75
Total CO_2E (All Sources)	**4,257.17**				

Source: CalEEMod output, Appendix G.

As shown, construction and operation of the Project would generate a total of approximately 4,257.17 MTCO2e/yr., which would exceed the significance threshold of 3,000 MTCO2e/yr.; therefore, Project-related GHG emissions are considered potentially significant. The majority of the GHG emissions (59%) are associated with non-construction related mobile sources, as shown previously in Table 5.02-7. Emissions of motor vehicles are controlled by State and Federal standards, and the Project has no control over these emissions.

5.02.6 - Project Impacts and Mitigation Measures

Greenhouse gas (GHG) emissions were evaluated in detail in this EIR in accordance with CEQA Guidelines Section 15064.4. Based on the Greenhouse Gas Analysis (Appendix N), the Project would generate emissions that exceed the applicable Mojave Desert Air Quality Management District (MDAQMD) threshold. Therefore, GHG impacts are considered significant and unavoidable.

This section discusses potential impacts associated with the Project and provides mitigation measures where necessary.

Impact GHG-20(a): Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Statement: Construction and operation activities under the proposed Project would generate greenhouse gas emissions either directly or indirectly, that will have a significant impact on the environment.

Impact Analysis

Urban Crossroads conducted a Greenhouse Gas Analysis for the proposed Project, dated March 24, 2026. The analysis provides the estimated GHG emissions that will result from Project construction and operation. Construction related GHG emissions are quantified and amortized over the life of the Project, which is identified as a 30-year period, in accordance with the MDAQMD which follows the South Coast Air Quality Management District (SCAQMD) recommendation. Project operational emissions would consist of mobile source emissions, area source emissions, energy source emissions, on-site cargo handling equipment emissions, solid waste management, refrigeration, stationary source and water supply, treatment, and distribution.

As shown in Table 5.-02.7, the Project would result in approximately 4,257.17 $MTCO_2e$/year, exceeding the 3,000 $MTCO_2e$ threshold. Therefore, the Project would result in a significant impact. The Project must incorporate the following mitigation measures **MM GHG-1** through **MM GHG-4** designed to reduce Project GHG emissions. Due to the programmatic and performance-based nature of the mitigation measures, precise quantification of emissions reductions is not feasible. However, these measures represent feasible strategies to reduce GHG emissions consistent with CEQA Guidelines.

Mitigation Measures

MM GHG-1 The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible:

- Only haul trucks meeting model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site.
- Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the 14848-04 GHG Report 48 Amargosa and Palmetto High-Cube Warehouse parking brake is engaged; and (3) telephone numbers of the building facilities manager and CARB to report violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place.
- Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.

- The minimum number of automobile electric vehicle (EV) charging stations required by the California Code of Regulations Title 24 shall be provided. In addition, the buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future.
- Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available.

MM GHG-2 The Project shall implement the following measures in order to reduce operational energy source air pollutant emissions to the extent feasible:

- The Project shall include rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.
- Install Energy Star-rated heating, cooling, lighting, and appliances.
- Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project.
- Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.

MM GHG-3 The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible:

- Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as forklifts, handheld landscaping equipment, yard trucks, office appliances, etc.
- Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible.
- Tenants shall be in, and monitor, compliance with all current air quality regulations for on-road trucks including the CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.

MM GHG-4 Prior to the issuance of a building permit, Developer shall provide documentation to the City of Hesperia demonstrating that the Project will achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application.

Level of Significance Before Mitigation

Potentially significant impact.

Level of Significance After Mitigation

Significant and Unavoidable

Impact GHG-20(b): Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact Statement: Implementation of the proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing greenhouse gas emissions; however, the Project would still result in a significant impact due to exceeding the applicable quantitative threshold.

As previously stated, pursuant to Section 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions. As such, the Project's consistency with the 2022 Scoping Plan is discussed below. It should be noted that the Project's consistency with the 2022 Scoping Plan also satisfies consistency with AB 32 since the 2022 Scoping Plan is based on the overall targets established by AB 32 and SB 32. Consistency with the 2008 and 2017 Scoping Plan is not necessary since both of these plans have been superseded by the 2022 Scoping Plan. Furthermore, CARB recommends the use of a CAP to determine a project's impacts with respect to GHG and states that projects that are consistent with a CAP are presumed to be consistent with the 2022 Scoping Plan.

2022 CARB Scoping Plan Consistency

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. Lastly, the Project would be required to comply with applicable elements outlined in the City's CAP. As such, the Project would be consistent with the 2022 Scoping Plan.

City of Hesperia CAP Consistency

As previously stated, the City of Hesperia CAP presents a number of strategies that will make it possible for the City to meet the recommended GHG emissions targets that are consistent with the reduction targets of the State. Strategy CAP-1 specifies that "projects that are consistent with this CAP could result in less than significant impacts regarding climate change. This is because emissions from these projects are generally accounted for in this CAP and would be consistent with this CAP reduction target. To be consistent with this CAP, CEQA projects must implement the applicable CAP implementation strategies listed in Section 4.2."

The Project demonstrates consistency with several applicable CAP strategies, as shown on Table 5.02-8:

Table 5.02-8: CAP Checklist Strategies

CAP Strategies	Consistency Analysis
CAP-1: Reduce emissions from new development through the CEQA process.	Consistent. The Project includes several Project Design Features as illustrated in section ES.4 and mitigation measures (MM GHG-1 through MMGHG-4) to reduce emissions attributable to the proposed Project for construction and operations.
CAP-2: Encourage mixed use development in new development and redevelopment areas.	Not Applicable.
CAP-3: Increase transit use.	Consistent. As discussed in the VMT Assessment, transportation demand management (TDM) measures are recommended to reduce single-occupancy vehicle trips and support increased transit use; however, they are not anticipated to reduce VMT impacts to a less than significant level.
CAP-4: Promote compact development by protecting open space and encouraging infill and redevelopment of underutilized parcels in urbanized areas.	Consistent. Implementation of the Project would consist of development at a vacant and undeveloped site.
CAP-5: Provide pedestrian connections in new and existing development to improve pedestrian mobility and accessibility.	No conflict. The project includes off-site roadway improvements that support circulation to improve pedestrian mobility; however, sidewalks are not currently present along Amargosa Road and specific pedestrian improvements are not identified.
CAP-6: Increase bicycle use through a safe and well-connected system of bicycle paths and end of trip facilities.	Consistent. There is an existing Class I bike path along Main Street east of the I-15 Freeway near the Project site to promote bicycle use.
CAP-7: Use traffic calming measures to improve traffic flow, pedestrian orientation, and bicycle use.	Consistent. Public roadway improvements would be implemented as part of the Project to improve traffic flow and bicycle use.
CAP-8: Use parking facility designs and parking management to reduce vehicle trips.	No conflict. As discussed in the VMT Assessment, transportation demand management (TDM) measures are identified that would reduce the use of single occupant vehicles by employees; however, parking management strategies are not specifically identified.
CAP-9: Increase the use of energy conservation features and renewable sources of energy.	Consistent. The Project would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural,

	mechanical, electrical, and plumbing systems in a building.
CAP-10: Reduce energy use from the transport and treatment of water.	Consistent. The Project would implement a Water Conservation Strategy to reduce water demands and associated energy use (see Project Design Feature section ES.4).
CAP-11: Improve the City's recycling and source reduction programs to make continued progress in minimizing waste.	Consistent. The Project will implement a 75% waste diversion program (see Project Design Feature section ES.4).
CAP-12: Participate in regional programs and initiatives that reduce greenhouse gas emissions.	Consistent. The Project would comply with all current applicable regulatory requirements that aim at reducing greenhouse gas emissions.

Source: Appendix G *Greenhouse Gas Analysis prepared by* Urban Crossroads.

Consistency with applicable plans, including the CARB Scoping Plan and the City of Hesperia Climate Action Plan, does not by itself ensure a less-than-significant impact under CEQA where a project exceeds an adopted numerical threshold of significance. Although the Project would be generally consistent with applicable plans and policies, it would exceed the 3,000 $MTCO_2e$/year threshold. Therefore, impacts would remain significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Level of Significance After Mitigation

Significant and Unavoidable

5.02.7 – Cumulative Impact

Greenhouse gas (GHG) emissions are, by their nature, cumulative because the environmental effects of climate change result from the incremental accumulation of emissions from sources worldwide rather than from any single project. This approach is consistent with CEQA Guidelines Section 15064(h), which recognizes that a project's incremental contribution to a cumulative impact is significant when it is cumulatively considerable. As described in this section, the proposed Project would generate GHG emissions during construction and operation, including emissions from mobile sources, energy use, water supply and treatment, solid waste, stationary sources, and on-site equipment. The Project's construction emissions were amortized over a 30-year period consistent with the methodology used in the analysis, and total annual Project emissions were calculated at approximately 4,257.17 metric tons of CO2e per year. This amount exceeds the 3,000 MTCO2e/year threshold applied in this section. Because climate change is a cumulatively significant impact and the Project's emissions exceed the applicable threshold, the Project would make a cumulatively considerable contribution to cumulative GHG emissions.

As discussed under Impacts GHG-20(a) and GHG-20(b), the Project would implement Mitigation Measures MM GHG-1 through MM GHG-4 to reduce GHG emissions to the extent feasible, including measures related to cleaner truck operations, electric vehicle infrastructure, rooftop solar, energy-efficient

equipment, tenant requirements, and LEED/CALGreen performance. The section also explains that the Project would be generally consistent with the 2022 CARB Scoping Plan and with applicable strategies in the City of Hesperia Climate Action Plan; however, the section expressly does not rely on the City's 2010 CAP as the sole basis for significance because it has not been updated to reflect later State law and more recent reduction targets. Most importantly, the chapter concludes that even with mitigation and despite plan consistency, Project emissions would remain above the 3,000 MTCO2e/year threshold and impacts would remain significant and unavoidable. For that reason, the Project's contribution to cumulative GHG impacts would also remain significant and unavoidable.

5.02.8 – Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(b) requires that an Environmental Impact Report identify impacts that remain significant after the implementation of all feasible mitigation measures.

As discussed under Impacts GHG-20(a) and GHG-20(b), the proposed Project would generate approximately 4,257.17 metric tons of CO_2e per year, which exceeds the applicable MDAQMD threshold of 3,000 $MTCO_2e$ per year. The Project incorporates feasible mitigation measures (MM GHG-1 through MM GHG-4) to reduce greenhouse gas emissions, including measures related to cleaner vehicle technology, electric vehicle infrastructure, renewable energy, energy efficiency, and tenant operational requirements.

However, despite implementation of these measures, the Project's total GHG emissions would remain above the applicable threshold. No additional feasible mitigation measures or alternatives have been identified that would reduce emissions to a less-than-significant level without substantially compromising the Project's basic objectives, including development of an employment-generating industrial use consistent with planned land uses.

Therefore, the Project's contribution to greenhouse gas emissions would remain significant and unavoidable.

In accordance with CEQA Guidelines Section 15093, if the Project is approved, the lead agency must adopt a Statement of Overriding Considerations acknowledging that the Project's benefits outweigh its significant and unavoidable environmental impacts.

5.03 - Transportation and Traffic

5.03.1 - Introduction

This section evaluates the Project's potential impacts related to transportation, including vehicle miles traveled (VMT), consistent with Senate Bill (SB) 743 and the City of Hesperia's adopted transportation impact analysis guidelines. Descriptions and analysis in this section are based, in part, on the following documents prepared by Ganddini Group, Inc. (Ganddini): the Revised Traffic Impact Analysis dated August 21, 2025 (Appendix K), Truck Trip Generation Comparison Analysis dated September 6, 2023 (Appendix L), the Vehicle Miles Traveled (VMT) Analysis dated July 8, 2025 and revised on July 28, 2026 (Appendix M).

During the Notice of Preparation (NOP) comment period, the City did not receive comments from surrounding jurisdictions requesting additional information and coordination related to potential traffic impacts.

The EIR provides a VMT-based impact assessment in accordance with CEQA and evaluates potential effects to local circulation and intersection operations to support interagency coordination and regional transportation planning.

In the Project's Initial Study, several transportation considerations were evaluated and determined not to result in potentially significant impacts; therefore, they were screened out from further analysis in this EIR. Specifically, the Project would not substantially increase hazards due to a geometric design feature or incompatible uses or result in inadequate emergency access or access to nearby uses. In addition, the Project would not include the construction or expansion of a bike system or bike lanes.

5.03.2 - Environmental Setting

Project Study Area

The Project site is located in the City of Hesperia, with regional access provided via the I-15 Freeway and Amargosa Road. The site is currently vacant and bounded by Avenal Street to the north, Palmetto Way to the south, and Amargosa Road to the east. Land uses surrounding the Project site primarily consist of vacant land, along with some scattered residential, industrial, and utility uses. Surrounding land uses include single-family residential neighborhoods, vacant land, a church, and commercial uses.

The proposed Project includes three (3) driveways off Palmetto Way. Direct access to the paved tractor-trailer parking area is provided by a 45-foot truck only driveway at the southwest corner of the site and a 50-foot driveway on the south side of the site for both autos and trucks. Direct access to the paved passenger vehicle parking area is provided by a 50-foot driveway at the southeast corner of the site for both autos and trucks. In total, the proposed Project includes 72 loading dock positions, 171 tractor-trailer stalls, and 311 passenger vehicle parking spaces. As the site is currently undeveloped, it does not generate any existing vehicular traffic.

A Project-specific Traffic Impact Analysis (TIA) was prepared by Ganddini dated August 18, 2022. A revised TIA was completed by Ganddini Group on August 21, 2025 (Appendix K). The purpose of the TIA is to assess potential transportation impacts resulting from development of the proposed Project both in the context of the California Environmental Quality Act (CEQA) and City of Hesperia discretionary authority. In accordance with City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT)

and Level of Service Assessment (LOS) (July 2020), existing and future conditions were analyzed for the proposed Project.

The TIA Scoping Agreement, which defines the study area, assumptions, and methodology, was reviewed and approved by the City and is included in Appendix B of the TIA (Appendix K). The proposed Project is anticipated to be developed in one phases.

Vehicular access will be provided through three (3) proposed driveways off Palmetto Way. Amargosa Road is classified as an Arterial roadway, while Palmetto Way is classified as Arterial 100' ROW in the City of Hesperia General Plan Circulation Element.

This section provides a summary of existing roadway conditions and travel patterns within the study area, which form the baseline for the impact analysis that follows.

Intersections Analyzed

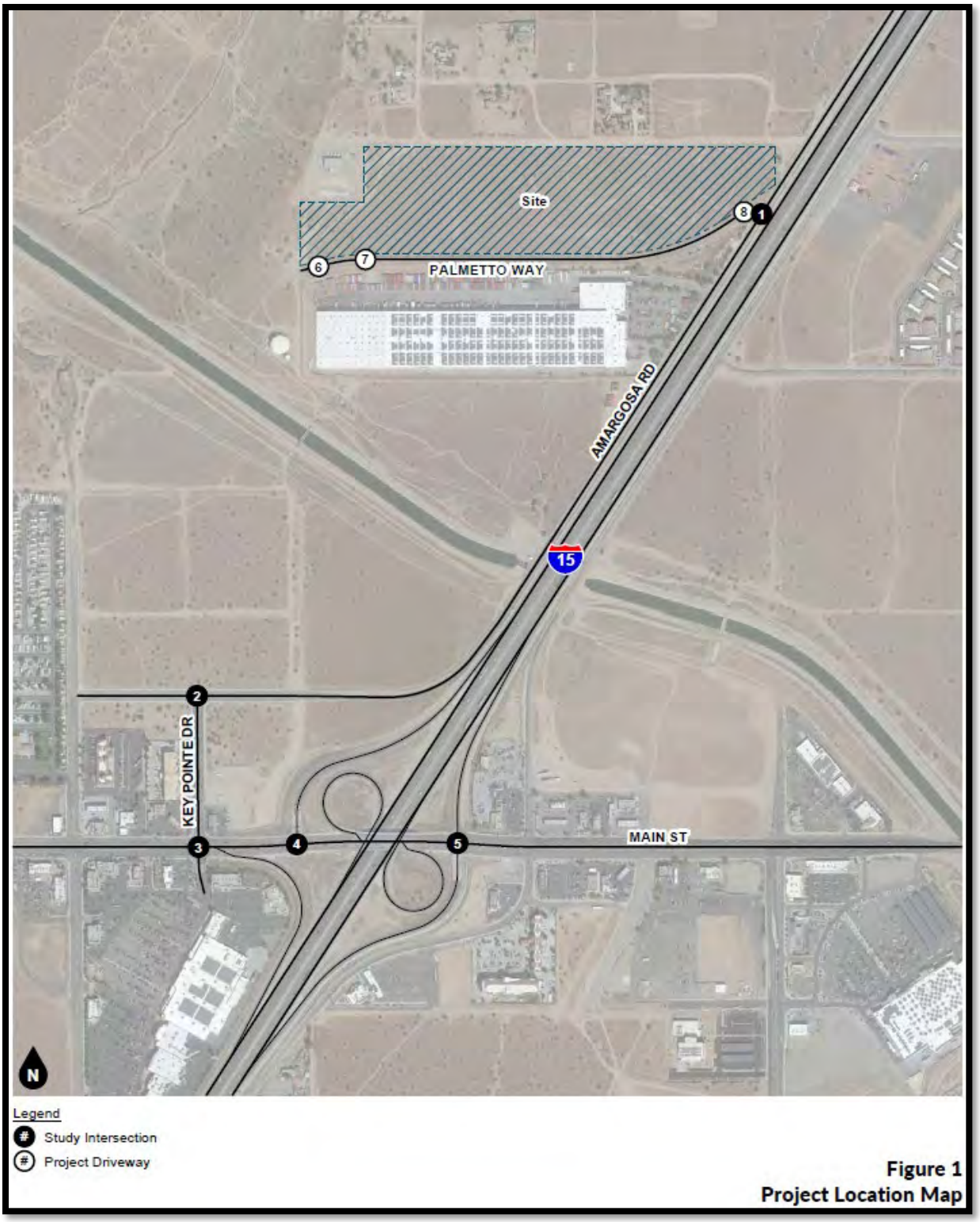
The eight (8) study area intersections listed in Table 5.03-1 were selected for evaluation in the Traffic Impact Analysis (Appendix K) based on the study intersections identified in the approved scoping agreement (Appendix K). The study area consists of the following study intersections within the City of Hesperia and California Department of Transportation jurisdictions. The 8 study area intersections are shown in Figure 5.03-1: Study Area.

Table 5.03-1: Intersection Analysis Locations

Number	Intersection	Jurisdiction
1	Amargosa Road (NS) at Palmetto Way (EW)	City of Hesperia
2	Key Pointe Drive (NS) at Amargosa Road (EW)	City of Hesperia
3	Key Pointe Drive (NS) at Main Street (EW)	City of Hesperia
4	I-15 SB Offramp (NS) at Main Street (EW)	Caltrans
5	I-15 NB Ramps (NS) at Main Street (EW)	Caltrans
6	Project West Driveway (NS) at Palmetto Way (EW)	City of Hesperia
7	Project Central Driveway (NS) at Palmetto Way (EW)	City of Hesperia
8	Project East Driveway (NS) at Palmetto Way (EW)	City of Hesperia

Source: Appendix K Ganddini: Revised Traffic Impact Analysis

Figure 5.03-1: Study Area



Source: Appendix K Ganddini: Revised Traffic Impact Analysis

5.03.3 – Traffic Analysis Scenarios

The following scenarios are analyzed during typical weekday AM and PM peak hour conditions:

- Existing
- Opening Year (2027) Without Project
- Opening Year (2027) With Project
- General Plan Buildout (2040) Without Project
- General Plan Buildout (2040) With Project

Existing Conditions

Existing Roadway System

Regional access to the project site is provided by the I-15 Freeway located adjacent to the project site to the east. Key roadways providing local circulation include Key Pointe Drive, Amargosa Road, Palmetto Way, and Main Street.

Transit Service

The study area is currently served by Victor Valley Transit Routes 20 and 114 along Amargosa Road adjacent to the project site.

Bicycle/ Pedestrian Facilities

There are currently no existing bike routes or sidewalks provided on Amargosa Road adjacent to the Project site. Main Street east of the I-15 Freeway is classified as a Class I Bike Path.

Truck Routes

The City of Hesperia General Plan does not identify Amargosa Road south of Bear Valley Road to the Project site as a truck route.

Existing Roadway Volumes

Existing peak hour traffic conditions are based upon morning peak period and evening peak period intersection turning movement counts obtained in May 2022 during typical weekday conditions. The weekday morning peak period was counted between 7:00 AM and 9:00 AM, and the weekday evening peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest combined volume.

Since the initial traffic counts were conducted in 2022, these traffic counts were increased by an ambient growth rate of 2.0% per year over three years (1.061% total) to reflect existing 2025 conditions.

Existing Levels of Service (LOS)
The intersection Levels of Service for Existing conditions have been calculated and are shown below in Table 5.03-2.

Table 5.03-2: Existing Intersection LOS

#	Study Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2	Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	8.8	A	9.7	A
3	Key Pointe Drive (NS) at Main Street (EW)	TS	15.1	B	24.2	C
4	I-15 SB Offramp (NS) at Main Street (EW)	TS	8.4	A	11.2	B
5	I-15 NB Ramps (NS) at Main Street (EW)	TS	4.3	A	12.9	B

1) CSS = Cross Street Stop; TS = Traffic Signal
2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
3) LOS = Level of Service

Project Trip Generation

Trip generation represents the amount of traffic which is both attracted to and produced by a development. The Project trip generation is based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Based on review of the ITE land use description, trip generation rates for ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) were determined to adequately represent the proposed use and were selected for calculation of the Project trip generation forecast. The number of trips generated is determined by multiplying the trip generation rates and directional distributions by the land use quantity.

As shown in Table 5.03-3, the proposed Project is forecast to generate 905 daily trips, including 74 trips during the AM peak hour and 77 trips during the PM peak hour.

Table 5.03-3: Vehicle Trips Generated

Vehicle Type	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

Ambient Growth Rate

To account for ambient growth on roadways, existing 2022 volumes were increased by a growth rate of two percent (2%) per year over five years for Opening Year (2027) conditions; this equates to a total growth factor of approximately 1.104. The ambient growth rate was conservatively applied to all movements at the study intersections.

General Plan Buildout (2040) Projections

General Plan Buildout (2040) forecasts have been determined using a growth increment approach with the San Bernardino Transportation Analysis Model (SBTAM) Year 2016 and Year 2040 travel demand model plots. This difference defines the incremental growth in forecast volumes over the 24-year period between 2016 and 2040. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between the current year analysis traffic counts (2022) and year 2040. For this purpose, linear growth between the Year 2016 base condition and the forecast Year 2040 condition was assumed. Since the increment between the current year and Year 2040 is 18 years of the 24-year time frame, a factor of 0.75 (i.e., 18/24) was used.

To derive AM and PM peak hour intersection turning movement volumes, the roadway link growth forecasts were further refined using a spreadsheet program developed by the Federal Highway Administration and consistent with forecasting procedures outlined in the National Cooperative Highway Research Program Report 255. The spreadsheet program uses a linear programming algorithm to calculate future turning movements based on the relationship of existing intersection turning movements and forecast model growth. The forecast turning movements developed by the spreadsheet program were reviewed for reasonableness and adjusted as necessary to ensure no less than 10 percent traffic growth. The end results of the post-processing procedures are future traffic volumes suitable for analysis.

FUTURE OPERATIONAL ANALYSIS

Opening Year (2027) Without Project

To develop Opening Year (2027) Without Project volume forecasts, existing volumes were combined with ambient growth and trips generated by other developments.

The intersection LOS for Opening Year (2027) Without Project conditions are shown in Table 5.03-4. The study intersections are forecast to operate within acceptable LOS (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

Table 5.03-4: Opening Year (2027) Without Project Intersection LOS

#	Study Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A

2	Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	11.0	B
3	Key Pointe Drive (NS) at Main Street (EW)	TS	17.1	B	86.1	F
4	I-15 SB Offramp (NS) at Main Street (EW)	TS	10.4	B	15.6	B
5	I-15 NB Ramps (NS) at Main Street (EW)	TS	6.0	A	14.4	B

1) CSS = Cross Street Stop; TS = Traffic Signal
2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
3) LOS = Level of Service

Opening Year (2027) With Project

The intersection LOS for Opening Year (2027) With Project conditions are shown in Table 5.10-5. The study intersections are projected to operate within acceptable LOS (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
    - Construct a second southbound left turn lane.

The proposed Project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

Table 5.03-5: Opening Year (2027) With Project Intersection Levels of Service

#	Study Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Amargosa Road (NS) at Palmetto Way (EW)	CSS	12.1	B	16.3	C
2	Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.5	A	11.2	B
3	Key Pointe Drive (NS) at Main Street (EW) – With Improvements	TS TS	17.5 14.6	B B	111.0 31.8	F C
4	I-15 SB Offramp (NS) at Main Street (EW)	TS	10.6	B	15.9	B

5	I-15 NB Ramps (NS) at Main Street (EW)	TS	6.3	A	14.5	B
6	Project West Driveway (NS) at Palmetto Way (EW)	CSS	**8.5**	A	**0.0**	A
7	Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8	Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

General Plan Buildout (2040) With Project

The intersection LOS for General Plan Buildout (2040) Without Project conditions are shown in Table 5.03-6. The study intersections are forecast to operate within acceptable LOS (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

Table 5.03-6: General Plan Buildout (2040) Without Project Intersection LOS

#	Study Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2	Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.0	A	12.5	B
3	Key Pointe Drive (NS) at Main Street (EW)	TS	24.9	C	160.2	F
4	I-15 SB Offramp (NS) at Main Street (EW)	TS	8.8	A	12.2	B
5	I-15 NB Ramps (NS) at Main Street (EW)	TS	8.1	A	13.5	B

1) CSS = Cross Street Stop; TS = Traffic Signal
2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
3) LOS = Level of Service

General Plan Buildout (2040) With Project

The intersection LOS for General Plan Buildout (2040) With Project conditions are shown in Table 5.03-7. The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
    - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

A conceptual striping exhibit for the improvement of a second southbound left turn lane at the intersection of Key Pointe Drive at Main Street (Int. #3).

The traffic signal would require modification from north-south permitted phasing to protected phasing.

Table 5.03-7: Opening Year (2027) With Project Intersection Levels of Service

#	Study Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Amargosa Road (NS) at Palmetto Way (EW)	CSS	13.6	B	17.1	C
2	Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	12.9	B
3	Key Pointe Drive (NS) at Main Street (EW) – With Improvements	TS TS	25.6 26.4	C C	189.5 50.1	F D
4	I-15 SB Offramp (NS) at Main Street (EW)	TS	9.0	A	12.3	B
5	I-15 NB Ramps (NS) at Main Street (EW)	TS	8.2	A	13.6	B
6	Project West Driveway (NS) at Palmetto Way (EW)	CSS	**8.5**	A	**0.0**	A

7	Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8	Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

1) CSS = Cross Street Stop; TS = Traffic Signal
2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.
3) LOS = Level of Service

Recommendations

Table 5.03-8: Recommendation Table

#	Intersection Location	Jurisdiction	Existing	Opening Year (2027) Without Project	Opening Year (2029) With Project	General Plan Buildout (2040) Without Project	General Plan Buildout (2040) With Project	IMPROVEMENTS IN FEE PROGRAM	Project responsibility	Project fair share
3	Key Pointe Drive (NS) at Main Street (EW)	City of Hesperia	None	None	Construct a second SB left turn left.	None	None	None	None	6.0%

5.03.4 – Local and Regional Funding Mechanisms

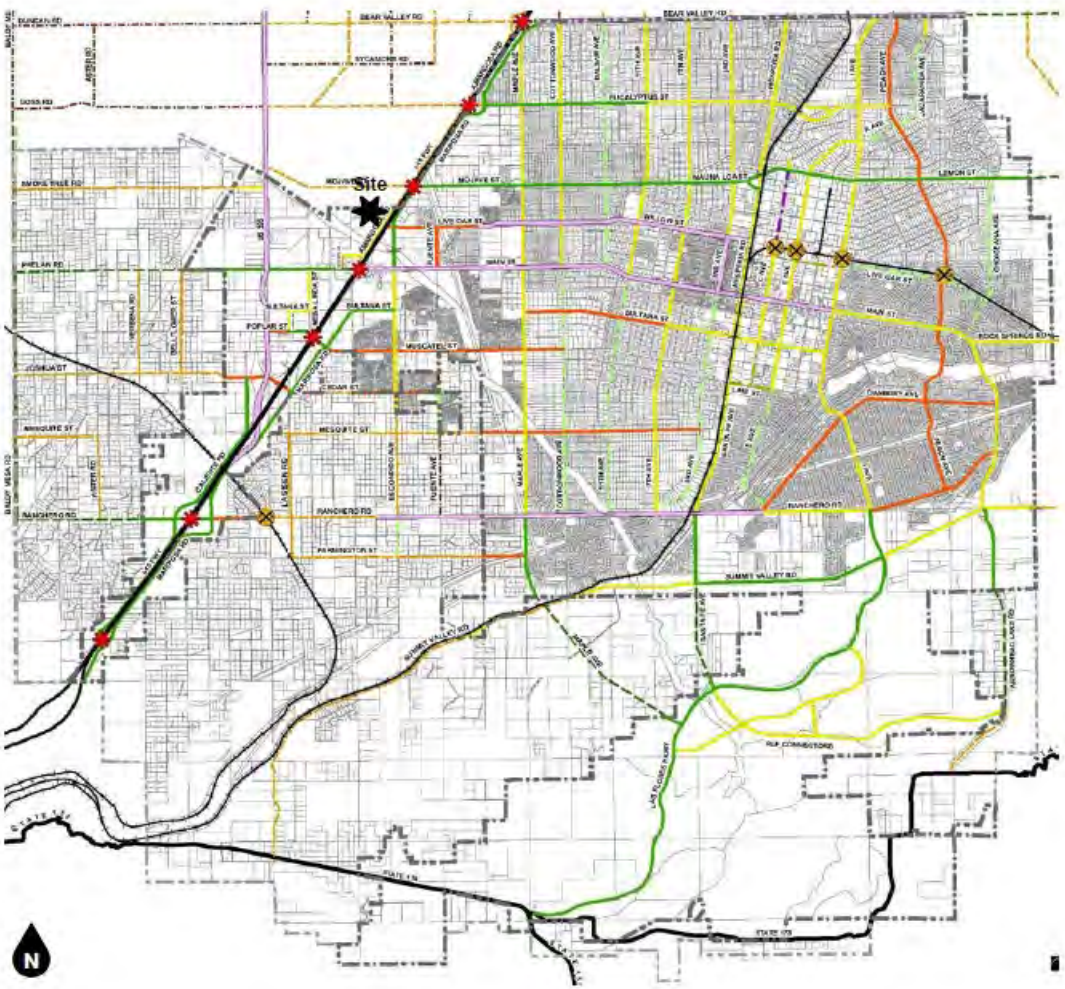
Project Fair Share Contribution

The Project fair share contribution is based on the proportion of Project peak hour intersection turning movement volumes contributed to the improvement location relative to the total new peak hour intersection turning movement volumes. The intersection fair share cost calculations are typically based on the higher of the AM or PM peak hour traffic volumes. The fair share calculations are intended only for the discussion purposes of the Traffic Impact Analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

5.03.5 – City of Hesperia General Plan Circulation Element

The City of Hesperia's Circulation Element (Circulation Element) details and outlines the City's plans to provide a transportation network system that allows the movement of people, goods, and services easily and safely throughout the city. A reliable and sound transportation strategy encourages economic growth and development and enhances the safety and quality of life of the community. The Circulation Element identifies the broader issues on which the City bases its circulation and transportation policies and outlines the City's goals and implementation policies to provide a safe and efficient transportation system strategy. It also includes non-motorized modes of transportation such as bicycle and equestrian paths and pedestrian routes as well as bus routes. Furthermore, Figure 5.03-2 shows the City's Circulation Element roadway classification map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan.

Figure 5.03-2: Circulation Element Map



Arterials

	(RoW)	(Curb-Curb)
Major Arterial	(120')	(104')* (92')**
Arterial	(100')	(72')
Secondary Arterial	(80')	(50')
Industrial Collector	(70')	(46')**
Suburban Collector	(60')	(36')**
Rural Collector	(60')	(48')* (40')**

Streets Outside City

Major Arterial
Arterial
Colllector

Misc.

City Boundary
Sphere of Influence
Railroad
At Grade Crossing
Bridge/overcrossing/undercrossing
Freeway Interchange

Special Street Section

Special Street

	(RoW)	(Curb-Curb)
Ranchero Road	(140')	(92')
Highway 395	(130')	(106')
Bear Valley Road (halfwidth)	(64')	(45')
Enhanced 3rd Avenue	(100')	(76')
Main Street Corridor "A"	(120')	(88')
Main Street Corridor "B"	(105')	(70')
Modified Live Oak-Willow St	(80')	(40')

Source: Figure 4 City of Hesperia General Plan Circulation Element.

5.03.6 - Regulatory Framework

Federal

Federal rules and regulations govern many facets of the City's traffic and circulation system including transportation planning and programming; funding; design, construction, and operation of facilities; and others. The County complies with all applicable rules and regulations of the Federal Highway Administration (FHWA), Urban Mass Transit Administration (UMTA), Federal Railroad Administration, Federal Aviation Administration (FAA), and other federal agencies. In addition, the City coordinates with federal resource agencies where appropriate in the environmental clearance process for transportation facilities.

State

Assembly Bill 1358

Assembly Bill (AB) 1358, also known as the California Complete Streets Act of 2008, requires cities and counties to include "Complete Street" policies in their general plans. These policies address the safe accommodation of all users, including bicyclists, pedestrians, motorists, public transit vehicles and riders, children, the elderly, and the disabled. These policies can apply to new streets as well as the redesign of corridors.

Senate Bill 375

Senate Bill (SB) 375 provides guidance regarding curbing emissions from cars and light trucks. There are four major components to SB 375. First, SB 375 requires regional greenhouse gas emission targets. These targets must be updated every 8 years in conjunction with the revision schedule of the housing and transportation elements of local general plans. Second, Metropolitan Planning Organizations are required to create a Sustainable Communities Strategy that provides a plan for meeting regional targets. Third, SB 375 requires housing elements and transportation plans to be synchronized on 8-year schedules. Finally, Metropolitan Planning Organizations must use transportation and air emissions modeling techniques that are consistent with the guidelines prepared by the California Transportation Commission.

Senate Bill 743

SB 743, approved in 2013, endeavors to change the way transportation impacts will be determined according to the California Environmental Quality Act (CEQA). The Governor's Office of Planning and Research (OPR) has recommended the use of VMT as the replacement for automobile delay-based Level of Service (LOS). In December 2018, the Natural Resources Agency finalized updates to CEQA Guidelines to incorporate SB 743 (i.e., VMT).

Regional

Southern California Association of Governments Regional Transportation Plan

The Southern California Association of Governments (SCAG) adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), also known as Connect SoCal, in 2021. Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions,

tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura.

Connect SoCal includes over 4,000 transportation projects—ranging from highway improvements, railroad grade separations, bicycle lanes, new transit hubs and replacement bridges–from county plans and seek to reduce traffic bottlenecks, improve the efficiency of the region's network, and expand mobility choices. In addition, Connect SoCal is supported by a combination of transportation and land use strategies that help the region achieve State greenhouse gas (GHG) emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and utilize resources more efficiently.

Connect SoCal

SCAG has published the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), referred to as "Connect SoCal." Connect SoCal seeks to improve mobility, promote sustainability, facilitate economic development, and preserve the quality of life for the residents in the region. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health. The goals included in Connect SoCal are pertinent to the proposed Project. These goals are meant to provide guidance for considering the proposed Project within the context of regional goals and policies. An analysis of the Project's consistency with the relevant goals of Connect SoCal is presented in Table 5.10-6. As indicated, the Project would not conflict with any Connect SoCal goals, and no impact would occur.

LOCAL REGULATIONS

City of Hesperia General Plan Circulation Element

The Circulation Element guides the development of a safe, efficient, and balanced transportation network that improves environmental quality, promotes healthy lifestyles, supports economic growth, and reduces congestion and access challenges as the City expands. The City's applicable Transportation and Traffic goals and policies from the Circulation Element are listed below.

ROADWAY NETWORK

Goal CI-1: A roadway network that provides for the safe and efficient mobility needs of residents, businesses, visitors, and emergency services.

Policy CI-1.1 Maintain a multi-year Capital Improvement Program to ensure the organized financing and construction of roadway and intersection improvements that meet existing and future demands of the community.

Policy CI-1.2 Periodically review and maintain street roadway classifications and standards to serve both local and regional traffic.

Policy CI-1.3 Support the development of regional transportation facilities that ensure the safe and efficient movement of people and goods between the city and outside areas, accommodating regional travel demands while minimizing adverse transportation impacts on Hesperia residents and businesses.

Policy CI-1.4 Strive to maintain a citywide level of service (LOS) standard of LOS D or better on all roadways and intersections; LOS E during peak hours shall be considered acceptable through freeway interchanges and major corridors (Bear Valley Road, Main Street/Phelan Road, Highway 395).

Policy CI-1.5 Coordinate with the County and other agencies on long-term plans, proposed development projects, and capital improvements while minimizing adverse traffic impacts on Hesperia residents and businesses.

Policy CI-1.6 Require new development to pay a fair share of needed transportation improvements based on a project's impacts to the City's motorized and non-motorized transportation networks.

Policy CI-1.7 Utilize intelligent transportation systems and research changing trends in mobility to more efficiently and safely move people and vehicles while managing motor vehicle speeds.

Policy CI-1.8 Encourage the installation, modernization, and improvement of grade separations at rail crossings to facilitate more convenient access for cars, trucks, and emergency vehicles.

Policy CI-1.9 Regularly update the pavement management plan and maintain roadways to ensure safety and functionality, as an investment strategy, and to improve the City's image and quality of life.

Policy CI-1.10 Coordinate with SBCTA, the County of San Bernardino, and Caltrans to improve the segment of Summit Valley Road between the City's boundary and Highway 138.

Policy CI-1.11 Support the implementation of Safe Systems Approach principles through the adoption and maintenance of a Local Roadway Safety Plan.

GOODS MOVEMENT

Goal CI-2: A circulation system that facilitates the movement of goods and services while minimizing impacts to sensitive land uses, such as homes, schools, and hospitals, and vulnerable roadway users, such as pedestrians and cyclists.

Policy CI-2.1 Maintain a network of truck routes that provides for the safe and efficient transport of goods while minimizing negative impacts on local circulation and sensitive receptors.

Policy CI-2.2 Require new truck-intensive land uses to design and incorporate space and facilities in order to reduce truck queueing, parking, and idling in the public rights-of-way.

Policy CI-2.3 Support improvements to roadways and rail facilities that increase the efficiency of goods movement; enhance the safety of rail operations, motor vehicles, and non-motorized modes of mobility; and minimize noise and vibration impacts on sensitive land uses.

Policy CI-2.4 Maintain Hesperia Airport as a general aviation facility, in conformance with the Comprehensive Airport Land Use Plan, and explore opportunities to activate the airport for community benefit.

NON-MOTORIZED TRANSPORTATION

Goal CI-3: A comprehensive bicycle and pedestrian network that promotes physical activity and non-automotive travel within Hesperia for people of all ages and abilities.

Policy CI-3.1 Design new on- and off-street facilities to accommodate pedestrians, cyclists, and equestrians based on a combination of the land use and roadway context to promote safety and efficiency for all users.

Policy CI-3.2 Establish and maintain an interconnected trail system that promotes safe and convenient travel to transit stops and between residential and commercial areas, schools, parks, recreation facilities, and other key destination points.

Policy CI-3.3 Leverage public rights-of-way, easements, and other public spaces to maintain and expand the non-motorized network.

Policy CI-3.4 Prioritize improvements along Main Street that facilitate a more pedestrian-friendly environment.

Policy CI-3.5 Promote new development and transportation demand management (TDM) strategies that will reduce household and employment vehicle miles traveled (VMT). Prioritize the implementation of TDM strategies over the expansion of roadway capacity.

PUBLIC TRANSIT

Goal CI-4: A transit network that provides for safe and convenient access to goods and services, job centers, and healthcare facilities.

Policy CI-4.1 Coordinate with Victor Valley Transit Authority (VVTA) to provide residents and workers with accessible and convenient service between residential neighborhoods, commercial centers, educational facilities, employment nodes, and medical facilities.

Policy CI-4.2 Coordinate with VVTA to install, improve, and maintain safe, clean, comfortable, well-lit, and rider-friendly transit stops that are well marked and visible to motorists.

Policy CI-4.3 Support the development of a regional commuter rail line that connects residents with employment centers and essential services in San Bernardino and Los Angeles counties and reduces traffic on Interstate 15

City of Hesperia's Main Street and Freeway Corridor Specific Plan

The Specific Plan was adopted in October 2008 and amended July 2021. The Specific Plan area consists of two corridors, Interstate-15 and Main Street, approximately 18 miles in length and with a total area of over 16 square miles. The Main Street corridor extends from I Avenue on the east to about a mile west of the interchange at the Interstate-15 Freeway. The Freeway corridor extends between the northern and southern City limits. The Specific Plan area is almost 80% vacant or underdeveloped. The Main Street corridor has vacant or underdeveloped land in 55% of its area while the Freeway corridor has development on only 15% of its area. The two corridors have been further subdivided into eight districts.

5.03.7 – Vehicle Miles Traveled (VMT)

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT. Based on guidance from the OPR Technical Advisory, the City of Hesperia adopted the Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) (July 2020) ("TIA Guidelines"), which establishes the City approved methodologies and thresholds.

VMT is a measurement of the total amount of vehicular travel for a specific area. It is typically normalized on a per-household, per-resident, per-employee, or per-service-population (residents plus employees) basis such that it is a metric of travel efficiency (e.g., fewer vehicle trips per person or shorter distances traveled in an automobile per person means that travel is more efficient). Ultimately, VMT is a powerful performance indicator of a jurisdiction's land use plan and multimodal transportation network.

VMT Screening Assessment

The City's TIA Guidelines identify screening criteria for certain types of projects that typically reduce VMT and may be presumed to result in a less than significant VMT impact. To qualify for VMT screening, the project needs to only satisfy one of the following screening criteria:

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

Based on initial review, the Project does not satisfy any of the screening criteria; therefore, further analysis for non-screened development is warranted in accordance with the City's TIA Guidelines.

VMT Assessment for Non- Screened Development

The Project-generated VMT and Project effect on VMT are calculated using San Bernardino Transportation Analysis Model (SBTAM) for the following scenarios:

- Baseline Conditions: This scenario reflects the existing SBTAM base year model.
- Baseline Plus Project: This scenario reflects the existing SBTAM base year model run with the addition of Project socio-economic data (SED) to the Project traffic analysis zone (TAZ).
- Cumulative No Project: This scenario reflects the existing SBTAM future year model (2050).
- Cumulative Plus Project: This scenario reflects a new SBTAM future year model run with the addition of Project SED to the TAZ.

VMT Modeling

In accordance with the City's TIA Guidelines, Ganddini calculated Project generated VMT using SBTAM+ (version 3.2). The SBTAM model is a trip-based travel demand model developed and maintained by the San Bernardino County Transit Authority (SBCTA). The model analyzes a complex system of inputs such as highway networks, socio-economic data (SED), driver behavior, and goods movement to forecast travel patterns as the region grows and changes. The SBTAM model covers the entire SCAG region, but the model data is more refined and focused within San Bernardino County as opposed to other areas of the region.

Project Land Use Conversion

To evaluate Project VMT within SBTAM, the Project land use was converted into socio-economic data (SED). Based on employment factors obtained from the Southern California Association of Governments Employment Density Study Summary Report, the proposed 499,714-square-foot high-cube warehouse was estimated to support 418 employees.

The Project site is located in TAZ 53908201. To isolate Project-generated VMT, the existing SED within the Project TAZ was moved to neighboring TAZ 53918203, which contains existing residential and employment-based land uses. The Project SED of 418 employees was then added to TAZ 53908201.

Project-generated VMT was calculated by isolating the Project in TAZ 53908201 and extracting the origin-destination matrix and assignment skims for the with-Project model run.

5.03.8 - Thresholds of Significance

Section XVII of Appendix G to the CEQA Guidelines addresses typical adverse effects to transportation and traffic and includes the following threshold questions to evaluate the proposed Project's impacts on transportation and traffic. Would the Project:

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) Result in inadequate emergency access?

Significance thresholds are set forth in City of Hesperia's Environmental Assessment Checklist, are derived from Section XVII of Appendix G to the CEQA Guidelines (listed above), and state that the proposed Project would have a significant impact to transportation and traffic if construction and/or operation of the proposed Project would:

Transportation

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) Result in inadequate emergency access or access to nearby users?

Countywide Daily VMT Estimates

As previously mentioned, the threshold for Project-generated VMT is based on the San Bernardino County regional average baseline VMT per service population. The numeric threshold of 32.7 VMT per service population referred to in the City's TIA Guidelines was calculated based on an earlier version of the SBTAM model that was current at the time of preparation of the guidelines. Since the project VMT was calculated based on the latest SBTAM+ model (version 3.2), an updated numerical threshold was calculated using the latest SBTAM+ model to provide a comparison of the Project's impact relative to the Countywide average.

Project-Generated VMT Impact Assessment

The Project-generated VMT is estimated to equal 47.7 VMT per service population under baseline conditions and 48.5 VMT per service population under cumulative conditions. These values exceed the City-established threshold of 35.3 VMT per service population by 35.1 percent and 37.4 percent, respectively. Therefore, the Project-generated VMT would result in a significant impact without mitigation.

Table 5.03-9: Project-Generated VMT Impact Assessment

Scenario	Project-Generated VMT Impact Assessment			
	Project VMT per SP	Threshold	Above/Below Threshold (%)	Significant VMT Impact?
2019 (Baseline)	47.7	35.3	+35.1%	Yes
2050 (Cumulative)	48.5	38.3	+37.4%	Yes

1) VMT = Vehicle Miles Traveled; SP = Service Population (Population + Employment)
2) Per current SBTAM+ (v3.2)

Project-Generated VMT Mitigation

The revised VMT Analysis evaluates potential transportation-related measures identified in the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. The effectiveness of many of these measures is constrained by the nature of the proposed warehousing use, which limits the ability to provide a mix of on-site land uses, and the limited infrastructure for alternative transportation modes in the Project vicinity, which limits the effectiveness of commute trip reduction programs. In addition, although the San Bernardino County Transportation Authority is developing a pilot VMT mitigation bank, the program is not formally in effect and participation is therefore not currently feasible.

Nevertheless, the Project would implement Mitigation Measures TRANS-2 and TRANS-3 to encourage employee carpooling, vanpooling, bicycling, and other alternative transportation modes. These measures require designated carpool and vanpool parking spaces in convenient locations and end-of-trip facilities, such as bicycle parking, lockers, and similar amenities. Implementation of these measures is expected to reduce employee commute-related vehicle trips and VMT to some degree. However, the extent of the reduction cannot be reliably quantified because it would depend on future tenant operations, employee participation, and the availability of supporting transportation infrastructure. Therefore, although Mitigation Measures TRANS-2 and TRANS-3 would reduce Project-generated VMT, they would not reduce VMT below the applicable threshold, and the impact would remain significant and unavoidable.

5.03.9 - Project Impacts and Mitigation Measures

This section discusses potential impacts associated with the proposed Project and provides mitigation measures where necessary.

Transportation

Impact TRANS-(a): The proposed Project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Impact Statement: The implementation of the proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Impact Analysis

A Traffic Impact Analysis (TIA) was prepared by Ganddini dated August 18, 2022. A revised TIA was completed by Ganddini on August 21, 2025. The purpose of the TIA is to assess potential transportation impacts resulting from development of the proposed Project both in the context of the California Environmental Quality Act (CEQA) and City of Hesperia discretionary authority. In accordance with City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020), existing and future conditions were analyzed for the proposed Project. Based on the study intersections identified in the approved scoping agreement, the study area consists of the following study intersections within the City of Hesperia and California Department of Transportation jurisdictions:

1. Amargosa Road (NS) at Palmetto Way (EW)
2. Key Pointe Drive (NS) at Amargosa Road (EW)
3. Key Pointe Drive (NS) at Main Street (EW)
4. I-15 SB Offramp (NS) at Main Street (EW)
5. I-15 NB Ramps (NS) at Main Street (EW)
6. Project West Driveway (NS) at Palmetto Way (EW)
7. Project Central Driveway (NS) at Palmetto Way (EW)
8. Project East Driveway (NS) at Palmetto Way (EW)

The following scenarios were analyzed during typical weekday AM and PM peak hour conditions:

- Existing
- Opening Year (2027) Without Project
- Opening Year (2027) With Project
- General Plan Buildout (2040) Without Project
- General Plan Buildout (2040) With Project

All study intersections are forecast to operate within acceptable Levels of Service (D or better) during peak hour conditions for Existing, Opening Year (2027) Without Project, and Opening Year (2027) With Project scenarios. Additionally, all study intersections except for the Key Pointe Drive (NS) at Main Street (EW) intersection are forecast to operate within acceptable Levels of Service (D or better) during peak hour conditions for General Plan Buildout (2040) With Project and General Plan Buildout (2040) Without Project scenarios.

The Key Pointe Drive (NS) at Main Street (EW) intersection is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour for General Plan Buildout (2040) With Project and General Plan Buildout (2040) Without Project scenarios. Mitigation Measure **TRANS-1** requires that the Project's fair share is contributed, as determined by the City, to construct a second southbound left turn lane at Key Pointe Drive (NS) at Main Street (EW). **TRANS-1** will ensure that the proposed Project will result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions, and impacts will be reduced to less than significant.

A Trip Generation Comparison Analysis was prepared by Ganddini dated November 28, 2022, and updated on February 28, 2025, and updated again on July 8, 2025. The Project proposes a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP). The purpose of the analysis is to evaluate the change in trip generation that can be expected between the proposed Project which is permitted under the CIBP land use designation, and an alternative land use consisting of commercial retail that is permitted under the existing RC land use designation. The proposed Project is forecast to generate approximately 1,083 daily Passenger Car Equivalent (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour. The alternative land use consisting of commercial retail is forecast to generate a total of approximately 25,505 daily trips, including 944 AM peak hour trips and 2,112 PM peak hour trips. 870 fewer trips during the AM peak hour and 2,035 less trips during the PM peak hour.

For the alternative commercial retail land use, it should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Therefore, Ganddini reduced the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative commercial retail land use trip generation in accordance with pass-by rates noted in the ITE Trip Generation Manual (11th Edition, 2021) since Amargosa Road adjacent to the Project site is a low volume roadway and pass-by trips would be minimal.

The proposed Project is forecast to generate approximately 25,505 fewer daily trips compared to a commercial retail land use of equivalent size, including 870 fewer trips during the AM peak hour and 2,035 fewer trips during the PM peak hour. Based on the trip generation comparison analysis, the proposed Project consisting of a 499,714 square-foot industrial building is forecast to generate substantially fewer trips (up to 659% fewer daily trips) compared to an alternative land use composed of 499,850 square feet of commercial retail. Therefore, the Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, impacts would be less than significant.

Policy Consistency Evaluation

- **General Plan Circulation Element**: The Project would impact local roadways and standards set back the City's General Plan Circulation Element. Traffic operations of roadway facilities are described using the term "Level of Service" (LOS), a qualitative measure of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. LOS ranges from LOS A, representing completely free-flow conditions, to LOS F, representing stop-and-go conditions; LOS E reflects near-capacity, unstable operations with minimal vehicle spacing. While the Project would affect LOS, the Ganddini Traffic Impact Analysis identifies the roadway improvement recommendation [Key Pointe Drive (NS) at Main Street (EW)] necessary to maintain consistency

with the General Plan. A detailed consistency analysis (see Table 5.03-10) concludes that the Project would not conflict with City's General Plan policies.

- **San Bernardino County Congestion Management Program**
- **Connect SoCal (SCAG RTP/SCS):** A detailed consistency analysis (see Table 5.03-11) concludes that the Project would not conflict with Connect SoCal goals. Goals related to mobility, active transportation, emissions reduction, and land use compatibility are supported by the Project's proposed improvements, required conditions, and regional coordination.

Table 5.03-10: City of Hesperia General Plan Consistency Analysis

Policy Category	Policy No.	Policy Description	Consistency Determination
Roadway Network	CI-1.1	Maintain a multi-year Capital Improvement Program to ensure organized financing and construction of roadway and intersection improvements that meet existing and future demands of the community. .	**Consistent** – The Project would fund or construct roadway improvements and pay applicable development impact fees supporting the City's Capital Improvement Program and long-term circulation needs.
Roadway Network	CI-1.2	Periodically review and maintain street classifications and standards to serve both local and regional traffic.	**Consistent** – Project access and frontage improvements would be designed in accordance with applicable City roadway classification and design standards.
Roadway Network	CI-1.3	Support the development of regional transportation facilities that ensure the safe and efficient movement of people and goods between the city and outside areas, accommodating regional travel demands while minimizing adverse transportation impacts on Hesperia residents and businesses.	**Consistent** – The Project would provide circulation improvements consistent with the City's adopted transportation network and regional mobility objectives.
Roadway Network	CI-1.4	Strive to maintain a citywide level of service (LOS) standard of LOS D or better on all roadways and intersections: LOS E during peak hours shall be considered acceptable through freeway	**Consistent –** The Traffic Impact Analysis demonstrates that roadway and intersection operations would remain consistent with the City's LOS standards with implementation of required mitigation measures and

Policy Category	Policy No.	Policy Description	Consistency Determination
		interchanges and major corridors (Bear Valley Road, Main Street/Phelan Road, Highway 395).	transportation improvements.
Roadway Network	CI-1.5	Coordinate with the County and other agencies on long-term plans, proposed development projects, and capital improvements while minimizing adverse traffic impacts on Hesperia residents and businesses. .	**Consistent** – The Project would not conflict with coordinated regional transportation planning and would utilize approved access points on designated arterials.
Roadway Network	CI-1.6	Require new development to pay a fair share of needed transportation improvements based on a project's impacts to the City's motorized and non-motorized transportation networks.	**Consistent** – Consistent – The Project would contribute fair-share funding and/or construction of required transportation improvements consistent with City impact fee programs.
Roadway Network	CI-1.7	Utilize intelligent transportation systems and research changing trends in mobility to more efficiently and safely move people and vehicles while managing motor vehicle speeds.	**Consistent** – The Project would be required to implement applicable operational improvements and comply with City and agency requirements supporting traffic efficiency s.
Goods Movement	CI-2.1	Maintain a network of truck routes that provides for the safe and efficient transport of goods while minimizing negative impacts on local circulation and sensitive receptors.	**Consistent** – The Project provides direct access to designated arterial roadways and truck routes and would not direct truck traffic through residential neighborhoods..
Goods Movement	CI-2.2	Require new truck-intensive land uses to design and incorporate space and facilities in order to reduce truck queueing, parking, and idling in the public rights-of-way.	**Consistent** – The Project includes adequate on-site truck circulation, loading areas, and staging capacity to accommodate truck operations without adversely affecting public roadways.
Non-Vehicular Transportation	CI-3.1	Design new on-and off-street facilities to accommodate	**Consistent** – The Project includes pedestrian facilities

Policy Category	Policy No.	Policy Description	Consistency Determination
		pedestrians, cyclists, and equestrians based on a combination of the land use and roadway context to promote safety and efficiency for all users.	and frontage improvements consistent with City standards and would not preclude bicycle or other non-motorized transportation improvements.
Non-Vehicular Transportation	CI- 3.2	Establish and maintain an interconnected trail system that promotes safe and convenient travel to transit stops and between residential and commercial areas, schools, parks, recreation facilities, and other key destination points.	**Consistent** – The Project would not interfere with existing or planned active transportation facilities and would support future connectivity through frontage improvements and compliance with City circulation requirements.
Non-Vehicular Transportation	CI-3.5	Promote new development and transportation demand management (TDM) strategies that will reduce household and employment vehicle miles traveled (VMT). Prioritize the implementation of TDM strategies over the expansion of roadway capacity.	**Consistent** – The Project would not conflict with the City's VMT reduction objectives and may implement transportation demand management measures where feasible.
Transit Network	CI-4.1	Coordinate with Victor Valley Transit Authority (VVTA) to provide residents and workers with accessible and convenient service between residential neighborhoods, commercial centers, educational facilities, employment nodes, and medical facilities.	**Consistent** – The Project would not interfere with existing or planned transit services and would maintain access to the regional transit network serving employees and visitors.

Source: City of Hesperia General Plan.

Table 5.03-11: Consistency Analysis with Connect SoCal 2024 Congestion Management

Goal	Goal Description	Project Consistency Discussion
Develop Regional Objectives for Congestion Management	Ensure the project aligns with SCAG CMP (Congestion Management Process) objectives to maintain acceptable congestion levels in the region.	**Consistent-** Project considers regional congestion objectives.
Define CMP Network	Consider impact on SCAG-defined transportation network, including highways, arterials, transit, bicycle/pedestrian, and freight routes.	**Consistent-** Project integrates into the multimodal network.
Develop Multimodal Performance Measures	Evaluate and support mobility across all modes, not just vehicle traffic.	**Consistent-** Supports multimodal transportation and SCAG performance measures.
Collect Data / Monitor System Performance	Project should enable monitoring of its congestion impacts.	**Consistent-** Project uses recognized regional data and modeling tools.
Analyze Congestion Problems and Needs	Identify potential impacts on congestion and address them through design or mitigation.	**Consistent-** Congestion impacts analyzed and mitigated.
Reduce Congestion and Travel Delays	Minimize regional travel delays resulting from the Project.	**Consistent-** Congestion reduction measures incorporated.
Promote Multimodal Transportation Options	Encourage walking, biking, transit, and other alternatives to single-occupancy vehicles.	**Consistent-** Supports SCAG's multimodal mobility goal.
Link Transportation Planning with Land Use	Integrate land use decisions to reduce travel demand and support sustainable mobility.	**Consistent-** Land-use planning supports congestion management.
Support Public Health and Equity	Minimize adverse impacts on vulnerable populations and enhance accessibility.	Equity and health considerations addressed.

Goal	Goal Description	Project Consistency Discussion
Create a Sustainable, Resilient System Through 2050	Contribute to long-term sustainability and resiliency of regional transportation network.	Project supports long-term sustainable transportation goals.

The Project would not conflict with an applicable plan, or ordinance, or policy addressing the circulation system, including those related to transit, roadway, bicycle, and pedestrian facilities. Therefore, impacts would be less than significant. While one intersection (Key Pointe Drive and Main Street) is projected to operate at an unacceptable level of service under cumulative conditions, this condition also occurs under the no Project scenario. With implementation of Mitigation Measure TRANS-1, the Project would not result in a substantial adverse effect on the circulation system or conflict with applicable plans and policies.

Level of Significance before Mitigation

Less than significant impact.

Mitigation Measures

TRANS-1 Contribute fair share, as determined by the City, to construct a second southbound left turn lane at Key Pointe Drive (NS) at Main Street (EW).

Level of Significance after Mitigation

Less than Significant.

Impact TRANS-(b): Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Impact Statement: The implementation of the proposed Project will conflict with CEQA Guidelines section 15064.3, subdivision (b).

Impact Analysis

CEQA Guidelines Section 15064.3, subdivision (b), addresses Vehicle Miles Traveled (VMT) and whether a land use project would generate VMT in excess of an applicable threshold of significance. Based on the revised VMT Analysis prepared by Ganddini Group, the Project is estimated to generate 47.7 VMT per service population under baseline conditions and 48.5 VMT per service population under cumulative conditions. These values exceed the City's established significance threshold of 35.3 VMT per service population. Therefore, the Project would result in a significant transportation impact without mitigation.

The Project's effect on VMT was also evaluated using link-level VMT per service population within the County boundary. Under baseline conditions, link-level VMT per service population would remain at 21.9 with and without the Project. Under cumulative conditions, link-level VMT per service population would remain at 25.2 with and without the Project. Therefore, the Project's effect on Countywide VMT would be less than significant without mitigation. This finding does not alter the separate conclusion that the Project's own generated VMT would exceed the City's threshold and result in a significant impact.

The VMT Analysis evaluated the VMT mitigation options identified in the City of Hesperia Transportation Impact Analysis (TIA) Guidelines, including modifications to the Project's built environment, implementation of Transportation Demand Management (TDM) measures, and participation in a VMT fee or mitigation banking program. As of May 2025, the San Bernardino County Transportation Authority (SBCTA) was developing a pilot VMT Mitigation Bank; however, the program is not formally in effect and is therefore unavailable as a feasible mitigation option. The VMT Analysis also evaluated the transportation-related measures identified in the CAPCOA Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (2024). The effectiveness of these measures is constrained by the nature of the proposed warehouse use, which limits opportunities to provide a mix of on-site land uses, and the limited availability of transit, bicycle facilities, and other alternative transportation infrastructure in the Project vicinity.

Notwithstanding these constraints, several Project-level TDM measures are feasible and would encourage employees to utilize alternative modes of transportation. The VMT Analysis identifies these measures as a single mitigation measure consisting of three TDM components. For consistency with the organization of this EIR, these components are presented below as Mitigation Measures TRANS-2 through TRANS-4. These measures require the Project to provide designated carpool and vanpool parking spaces in convenient locations, install end-of-trip facilities including bicycle parking and lockers, and implement a commute trip reduction marketing program that promotes alternatives to single-occupant vehicle travel, including carpooling, vanpooling, transit, bicycling, and walking. While these measures could reduce employee commute-related VMT depending on future tenant operations and employee participation, implementation is expected to have only a marginal effect on VMT reduction, if any. No quantifiable VMT reduction is assumed. Therefore, the Project's VMT per service population would continue to exceed the City's significance threshold, and the transportation impact would remain significant and unavoidable.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

TRANS-2 Designated Carpool and Vanpool Parking

Prior to issuance of an occupancy permit, the Project Applicant shall designate carpool and vanpool parking spaces in convenient locations near employee building entrances. The spaces shall be clearly marked and reserved for carpool and vanpool use. The designated spaces shall be shown on the final site plan and maintained for the life of the Project.

TRANS-3 End-of-Trip Facilities

Prior to issuance of an occupancy permit, the Project Applicant shall provide end-of-trip facilities to encourage employees to use bicycles and other alternative modes of transportation. Such facilities shall include bicycle parking, lockers, and similar amenities, as appropriate. The facilities shall be shown on the final site plan and maintained for the life of the Project.

TRANS-4 Commute Trip Reduction Marketing Program

Prior to issuance of an occupancy permit, the Project Applicant shall develop and implement a commute trip reduction marketing program for Project employees. Informational materials promoting alternatives to single-occupant vehicle travel, including carpooling, vanpooling, transit, bicycling, and walking, shall

be displayed in prominent employee locations, such as employee break rooms, employee entrances, or other common areas. The informational materials shall be maintained for the life of the Project.

Level of Significance After Mitigation
Significant and unavoidable impact.

5.03.10 – Cumulative Impacts

This cumulative impact analysis considers the proposed Project in combination with other past, present, and reasonably foreseeable future development within the study area identified in the Traffic Impact Analysis, as well as growth anticipated under the City of Hesperia General Plan, the Main Street and Freeway Corridor Specific Plan, and the regional planning assumptions reflected in the San Bernardino Transportation Analysis Model (SBTAM). This geographic scope is appropriate because transportation conditions are influenced by traffic patterns on the local and regional roadway network, including the eight (8) study intersections evaluated in the Traffic Impact Analysis (Appendix K), and by broader travel behavior captured in the Vehicle Miles Traveled (VMT) analysis (Appendix M).

As described in this section, the Project would not conflict with an applicable program, plan, ordinance, or policy addressing the circulation system following implementation of Mitigation Measure TRANS-1, which requires the Project to contribute its fair share, as determined by the City, toward construction of a second southbound left-turn lane at Key Pointe Drive and Main Street. In addition, the section concludes that the Project would not substantially increase hazards due to a geometric design feature or incompatible uses, would not result in inadequate emergency access, and would not adversely affect bicycle or pedestrian facilities. Accordingly, with implementation of TRANS-1, the Project would not make a cumulatively considerable contribution to cumulative impacts related to local circulation, intersection operations, geometric design, or emergency access.

With respect to vehicle miles traveled, the analysis demonstrates that the Project would generate 47.7 VMT per service population under baseline conditions and 48.5 VMT per service population under cumulative conditions, exceeding the City's significance threshold of 35.3 VMT per service population. The effectiveness of many of the transportation-related measures evaluated in the revised CAPCOA feasibility assessment is constrained by the nature of the proposed warehousing use and the limited availability of alternative transportation infrastructure in the Project vicinity. The developing SBCTA pilot VMT mitigation bank is also not currently available.

Mitigation Measures TRANS-2 through TRANS-4 would require designated carpool and vanpool parking spaces and end-of-trip facilities to encourage employee use of shared and alternative transportation modes. Although these measures would reduce employee commute-related VMT to some degree, the reduction cannot be reliably quantified and would not reduce Project-generated VMT below the applicable threshold. Because VMT is the CEQA transportation metric established by CEQA Guidelines Section 15064.3, and because the Project's incremental contribution to regional VMT would remain above the applicable threshold, the Project's VMT impact would be cumulatively considerable. Therefore, the Project's cumulative transportation impact related to VMT would remain significant and unavoidable after mitigation.

5.03.11 – Significant and Unavoidable Transportation Impacts

Vehicle Miles Traveled (VMT)

The proposed Project would result in a significant and unavoidable impact related to Vehicle Miles Traveled (VMT). As discussed under Impact TRANS-(b), the Project would exceed the City of Hesperia's threshold of 35.3 VMT per service population under both baseline and cumulative conditions.

The VMT Analysis evaluated transportation-related measures identified in the CAPCOA Handbook. The effectiveness of many potential strategies is constrained by the proposed warehousing use and by regional factors outside the control of the Project Applicant, including limited transit service, bicycle infrastructure, surrounding land use patterns, and regional travel behavior. The developing SBCTA pilot VMT mitigation bank is also not formally in effect and is not currently available to the Project.

Mitigation Measures TRANS-2 through TRANS-4 would require the Project to provide designated carpool and vanpool parking spaces, end-of-trip facilities, including bicycle parking, lockers, and similar amenities and trip reduction marketing. These measures would encourage employees to use shared and alternative transportation modes and would reduce commute-related VMT to some degree. However, the amount of reduction cannot be reliably quantified because it would depend on future tenant operations and employee participation. Given the magnitude by which the Project would exceed the City's threshold under baseline and cumulative conditions, implementation of these measures would not reduce VMT below the applicable threshold. Therefore, the impact would remain significant and unavoidable after mitigation.

SECTION 6: ALTERNATIVES TO THE PROPOSED PROJECT

6.1 - Introduction

In accordance with CEQA Guidelines Section 15126.6, this Draft Environmental Impact Report (Draft EIR) contains a comparative impact assessment of alternatives to the proposed Project. The primary purpose of this chapter is to provide decision-makers and the public with a reasonable number of feasible Project alternatives that could attain most of the basic Project objectives, while avoiding or reducing one or more of the Project's significant adverse environmental effects. The alternatives analysis focuses on the Project's significant and unavoidable impacts related to greenhouse gas (GHG) emissions and vehicle miles traveled (VMT), consistent with CEQA Guidelines Section 15126.6(b). Important considerations for these alternatives analyses are noted below (as stated in State CEQA Guidelines § 15126.6):

- An EIR need not consider every conceivable alternative to a Project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
    - Failure to meet most of the basic Project objectives;
    - Infeasibility; or
    - Inability to avoid significant environmental effects.

6.1.1 - Significant Unavoidable Impacts

The proposed Project would result in significant and unavoidable environmental impacts related to Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions, as identified in the transportation and greenhouse gas analyses prepared for this EIR. These impacts therefore require consideration in the alternatives analysis pursuant to CEQA Guidelines Section 15126.6(a). Despite implementation of feasible mitigation measures, neither impact can be reduced to a less-than-significant level.

Transportation (Vehicle Miles Traveled)

- Impact TRANS-37(b): The Project would generate an increase in vehicle miles traveled relative to existing (No Project) conditions and the exceeds the City of Hesperia's established VMT significance thresholds.
- The City's *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (July 2020) require projects exceeding thresholds to implement feasible mitigation measures aimed at reducing VMT. However, the Project's VMT analysis determined that even with potential transportation demand management (TDM) strategies, reductions would not be sufficient to meet the City's thresholds.
- The only transportation mitigation measure identified for the Project—Mitigation Measure TRANS-1: Contribute fair share, as determined by the City, to construct a second southbound left-turn lane at Key Pointe Drive (NS) at Main Street (EW)—addresses intersection level of service (LOS) impacts only. This measure does not reduce VMT and therefore does not mitigate the Project's significant VMT impact.

- Because no feasible mitigation measures are available to reduce VMT below the City's threshold, and the primary contributing factors (regional travel behavior, roadway network characteristics, and land use distribution) are outside the City's control, the Project's VMT impact remains significant and unavoidable.

As such, VMT represents a project-level impact that cannot be feasibly mitigated through traditional transportation improvements and is primarily influenced by land use patterns and regional travel behavior.

Greenhouse Gas Emissions

- Based on the *Urban Crossroads Greenhouse Gas Analysis* (Appendix G), construction and operational emissions associated with the Project are estimated to total approximately 4,894.17 MT O e per year a r i ed ver a -year operational life consistent with regional air quality district guidance (MDAQMD and SCAQMD)
- This al exceeds he A M MT O e year hresh ld r ind s rial pr ec s. The r ec would implement feasible GHG reduction measures consistent with the City's adopted Climate Action Plan (CAP) Screening Tables, including:
    - Energy-efficient building design and compliance with CALGreen Standards;
    - Installation of EV-capable parking spaces;
    - Implementation of water-efficient landscaping and plumbing fixtures; and
    - Solid waste diversion consistent with City recycling goals.
- While these measures would incrementally reduce GHG emissions, the reductions are insufficient to achieve emissions below the applicable significance threshold. Therefore, the Project's impact related to GHG emissions would remain significant and unavoidable.

Accordingly, the Project would result in the following significant and unavoidable impacts:

1. **Vehicle Miles Traveled (VMT)**, and
2. **Greenhouse Gas (GHG) Emissions.**

These impacts result from factors that cannot feasibly be mitigated at the project level. Accordingly, the City must adopt **a Statement of Overriding Considerations pursuant** to CEQA Guidelines §15093 before approving the Project.

6.1.2 - Alternative Eliminated from Further Consideration

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are potentially feasible and, therefore, merit in-depth consideration, and which are clearly infeasible. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (State CEQA Guidelines § 15126.6.

This section identifies the alternative considered by the lead agency, but rejected as infeasible, and provides a brief explanation of the reasons for its exclusion. As noted above, alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the Project objectives, are infeasible, or do not avoid any significant environmental effects.

Alternative Site Alternative: The Alternative Site Alternative was considered at a programmatic level only and is n analy ed in de ail d e lac speci ic availa le and c para le si es. An alternative location i hin an her ind s rially ned area esperia s ch as parcels n r h Main ree r i hin he Rail Spur Industrial Area, was considered. While relocating could theoretically reduce VMT by placing the facility closer to major transportation corridors or workforce concentrations, this option was determined to be infeasible for the following reasons:

- appr pria ely si ed (acre) vacan parcel i h necessary in ras r c re and ree ay access is currently available.
- Relocation would require new entitlements, infrastructure extensions, and potentially more extensive grading and biological disturbance.
- It would not necessarily achieve lower VMT or GHG emissions, as truck routing and regional trip lengths would remain comparable.
- No alternative site was identified that is both available to the Applicant and capable of accommodating the Project's operational needs.

Therefore, the Alternative Site was eliminated from further consideration due to infeasibility and uncertain environmental benefit.

6.1.3 - Alternatives to the Proposed Project

The hree al erna ives analy ed in de ail incl de he A-required No Project Alternative and three feasible build al erna ives s ari ed el

- **No Project Alternative:** Under this alternative, the Project site would remain in its existing vacant and disturbed condition. No warehouse construction, utility extension, or grading would occur, and he si e ld re ain i s c rren land se and nin desi na i ns Re i nal ommercial (RC).
- **Alternative 1: Reduced Intensity Industrial Alternative**: This alternative would reduce the overall building area to approximately 350,000 square feet (about 70 percent of the proposed Project). The number of loading docks, trailer stalls, and parking spaces would be proportionally reduced. Site circulation and access would remain similar to the proposed Project.
- **Alternative 2: Enhanced Transportation Demand Management (TDM) Alternative**: This alternative would retain the same 499,714-square-foot building footprint and program but incorporate enhanced on-site sustainability and mobility features designed to reduce GHG and VMT generation. Examples include:
    - Installation of electric vehicle (EV) charging stations for passenger and delivery vehicles;
    - Employee carpool, vanpool, or shuttle programs coordinated with regional transit hubs;
    - Bicycle and pedestrian connectivity improvements along Amargosa Road;
    - On-site amenities (break areas, food services) to reduce off-site trips; and
    - Preference for electric or low-emission delivery fleets.

- **Alternative 3**: **Reduced Building Footprint with Expanded Landscape Buffer Alternative**: Under this alternative, the building would be slightly reconfigured and reduced to approximately 475,000 square feet to allow for increased setbacks and landscaped buffers along Amargosa Road and Palmetto Way. Trailer parking would be reduced, and landscaping would increase from 19 percent to roughly 25 percent of the site area.

To support clarity and readability, the build alternatives are presented using a consolidated format that groups impact topics into broader categories. Each alternative includes a discussion of its purpose, design concept, environmental benefits, ability to meet Project objectives, and CEQA conclusions. All resource areas analy ed in he R are addressed h h n nder individ al s headin s as sed in he r ec Alternative. This format maintains consistency with CEQA while avoiding redundancy in the Alternatives Analysis.

The al erna ives are analy ed in he sec i ns el and c pared i h he pr p sed r ec . n several instances, both the Project and an alternative may result in the same CEQA significance conclusion (e.g., less than significant), but the relative degree of impact may differ. These distinctions form the basis for identifying greater or lesser impacts and ultimately the Environmentally Superior Alternative.

6.2 - Project Objectives

The following objectives have been identified in order to aid decision makers in their review of the proposed Project, and its associated environmental impacts.

1. **Develop an Industrial Warehouse and Distribution Facility**
   Construct an industrial warehouse and distribution facility, including ancillary office space and supporting improvements, to accommodate logistics and good movement uses.

2. **Provide Industrial Uses in a Regionally Accessible Location**
   Locate industrial development within the City of Hesperia in proximity to major transportation corridors to support regional and interstate goods movement.

3. **Facilitate Efficient Use of a Vacant Site**
   Develop the approximately 30.52-acre r ec si e i h a se ha axi i es i s ili y hile considering site constraints and surrounding land uses.

4. **Ensure Consistency with Local Planning Frameworks**
   Obtain necessary land use entitlements, including a Specific Plan Amendment and Zone Change ali n he r ec si e s land se and nin i h he ercial nd s rial siness ar designation, facilitating compatibility with surrounding land uses and the City's planning objectives.

5. **Provide Necessary Infrastructure and Site Improvements**
   Incorporate appropriate infrastructure and site design features, including circulation, parking, utilities, stormwater management, and landscaping, to support safe and functional operations.

6. **Support Economic Activity and Employment Opportunities**
   Contribute to the local and regional economy by providing opportunities for employment and supporting industrial and logistics- related business activity.

7. **Accommodate Modern Logistics Operations**
   Design the Project to accommodate contemporary warehouse and distribution operations, incl din appr pria e ildin si e c n i ra i n and si e lay .

6.3 - No Project Alternative

This alternative assumes that no development would occur on the 30.52-acre Project site. The site would remain in its existing, undeveloped condition with disturbed soils and sparse vegetation. No warehouse construction, grading, or infrastructure improvements would take place, and the existing Regional ercial (R) land se desi na i n and nin ld re ain in e ec .

6.3.1 - Impact Analysis

Under the No Project Alternative, no development would occur on the 30.52-acre Project site. As a result, the environmental conditions on the site would remain unchanged, and no Project-related construction or operational activities would take place.

Air Quality

Because no construction or operational activities would occur, the No Project Alternative would not generate emissions of criteria pollutants or toxic air contaminants associated with grading, building construction, or long-term warehouse operations. As such, the No Project Alternative would not result in any new air quality impacts. Compared to the proposed Project—which was determined to result in less-than-significant air quality impacts—the No Project Alternative would further reduce emissions by eliminating all Project-related sources. Therefore, the No Project Alternative would result in the greatest reduction in air quality emissions; however, because the Project's air quality impacts are already less than significant, this reduction does not represent a change in impact significant under CEQA.

Greenhouse Gas Emissions

The No Project Alternative would eliminate all construction and operational greenhouse gas (GHG) emissions associated with the proposed Project. This includes emissions from site preparation, building construction, vehicle trips, energy use, and ongoing warehouse operations. As a result, the No Project Alternative would avoid the significant and unavoidable GHG impacts identified for the proposed Project and would not contribute to cumulative climate change impacts. Compared to the proposed Project, this alternative would result in a substantial reduction in GHG emissions and would be environmentally superior with respect to this impact category.

Transportation (Vehicle Miles Traveled)

Under the No Project Alternative, no new vehicle trips would be generated, and there would be no increase in vehicle miles traveled (VMT) in the Project vicinity or region. Therefore, the No Project Alternative would avoid the significant and unavoidable transportation impacts identified for the proposed Project related to VMT per capita exceeding applicable thresholds. This alternative would not require

implementation of VMT reduction strategies or mitigation measures, as no impact would occur. Compared to the proposed Project, the No Project Alternative would result in a substantial reduction in transportation-related impacts and would be environmentally superior with respect to VMT.

In addition to the issue areas evaluated in this EIR, the No Project Alternative would avoid all other potential environmental effects associated with development, including grading, utility extensions, and changes to site conditions. Existing biological resources, including Joshua trees and ruderal vegetation, would remain undisturbed, and there would be no changes to hydrology, utilities, or local infrastructure.

Ability to Meet Project Objectives

The No Project Alternative would not meet any of the Project's fundamental objectives. Specifically, it would not provide for the development of an industrial warehouse and distribution facility, would not generate employment opportunities, would not facilitate infrastructure improvements, and would not support the City's economic development goals or efficient use of a vacant site.

Feasibility

The No Project Alternative is physically feasible, as it would maintain the site in its existing condition. However, it would be economically and functionally infeasible because it would not achieve the underlying purpose of the Project or the City's land use and economic development objectives for the site.

Conclusion

The No Project Alternative would avoid all environmental impacts associated with the proposed Project, including the significant and unavoidable impacts related to greenhouse gas emissions and transportation (VMT). However, it would not meet any of the Project objectives and would not provide the intended economic or land use benefits. As required by California Environmental Quality Act (CEQA), this alternative serves as a baseline for comparison with the proposed Project and other alternatives and is considered the environmentally superior alternative.

6.4 - Alternative 1: Reduced Intensity Industrial Alternative

This alternative would reduce the total building area from approximately 499,714 square feet to 350,000 square feet, maintaining the same general layout and land use but at a smaller scale. The facility would include proportionally fewer loading docks, truck stalls, and passenger vehicle parking spaces. Site access and circulation patterns would remain consistent with the proposed Project.

6.4.1 - Impact Analysis

The Reduced Intensity Industrial Alternative would decrease the total building area to approximately 350,000 square feet, resulting in a corresponding reduction in construction activity and operational intensity.

Air Quality

Construction and operational emissions of criteria pollutants and toxic air contaminants would be reduced compared to the proposed Project due to decreased grading, fewer construction activities, and lower operational throughput (i.e., fewer truck trips and employee commutes). However, because the proposed

Project's air quality impacts were determined to be less than significant, this alternative would not result in a substantial change in impact significance. Air quality impacts would remain less than significant.

Greenhouse Gas Emissions

This alternative would reduce total greenhouse gas (GHG) emissions relative to the proposed Project due to reduced building area, lower energy consumption, and fewer vehicle trips. However, the reduction in emissions would not be sufficient to reduce total GHG emissions below the applicable significance threshold. As a result, GHG impacts would remain significant and unavoidable, although reduced, but not to a less-than significant level compared to the proposed Project.

Transportation (Vehicle Miles Traveled)

The reduced scale of development would result in fewer employee and truck trips, leading to a reduction in total VMT. However, because the Project site is located within a regional logistics corridor with limited access to transit and housing, the decrease in VMT would not be sufficient to meet the City's threshold for VMT per capita. Therefore, transportation impacts related to VMT would remain significant and unavoidable, although reduced compared to the proposed Project.

Other environmental impacts, including biological resources, noise, and hydrology, would also be reduced proportionally with the smaller development footprint and would remain less than significant with implementation of mitigation measures and regulatory compliance.

Ability to Meet Project Objectives

This alternative would meet most of the Project's objectives, including developing a modern industrial use, providing new employment opportunities, and improving local infrastructure. However, it would provide fewer jobs and a lower economic return compared to the proposed Project.

Feasibility

This alternative is feasible from both a physical and regulatory standpoint, as it would require the same entitlements and infrastructure improvements as the proposed Project.

Conclusion

The Reduced Intensity Industrial Alternative would reduce GHG emissions and VMT relative to the proposed Project but would not eliminate significant and unavoidable impacts. It would provide moderate environmental benefits while still achieving most Project objectives.

6.5 - Alternative 2: Enhanced Transportation Demand Management (TDM) Alternative

This alternative would maintain the same overall building area of 499,714 square feet but would incorporate additional sustainability and mobility features intended to reduce GHG emissions and VMT. Key measures could include:

- Installation of electric vehicle (EV) charging stations for employees and truck fleets;

- Implementation of carpool, shuttle, or vanpool programs;
- Bicycle and pedestrian facilities connecting to Amargosa Road;
- On-site amenities such as food and rest areas to reduce off-site trips; and
- Preference for electric or low-emission delivery fleets.

6.5.1 - Impact Analysis

The Enhanced TDM Alternative would maintain the same development intensity as the proposed Project but incorporate transportation demand management and sustainability strategies.

Air Quality

Implementation of TDM strategies and cleaner vehicle technologies would reduce operational emissions associated with employee commuting and fleet operations. However, because the overall development intensity remains unchanged, construction emissions and a substantial portion of operational emissions would be similar to the proposed Project. Air quality impacts would remain less than significant, consistent with the proposed Project.

Greenhouse Gas Emissions

TDM measures and potential electrification strategies would reduce operational GHG emissions compared to the proposed Project by decreasing vehicle trips and improving energy efficiency. However, due to the scale of the facility and continued reliance on regional freight movement, total GHG emissions would still exceed applicable thresholds. Therefore, GHG impacts would remain significant and unavoidable, although reduced, but not to a less than-significant level.

Transportation (Vehicle Miles Traveled)

TDM strategies would reduce VMT per employee by encouraging carpooling, alternative transportation modes, and reduced trip generation. However, because a substantial portion of VMT is driven by goods movement and regional commute patterns beyond the control of the Project, the reduction would not be sufficient to meet the City's VMT threshold. Impacts would remain significant and unavoidable.

Other environmental impacts would be similar to the proposed Project, with minor incremental improvements due to reduced operational intensity in certain areas.

Ability to Meet Project Objectives

This alternative would fully meet the Project's objectives while incorporating enhanced sustainability and mobility benefits. It would support local employment, improve infrastructure, and promote consistency with City climate and transportation policies.

Feasibility

The alternative is feasible and could be implemented through standard conditions of approval or design re ire en s. ld n re ire chan es land se desi na i ns r nin .

Conclusion

The Enhanced TDM Alternative would reduce GHG emissions and VMT compared to the proposed Project but would not eliminate significant and unavoidable impacts. While it would fully meet Project objectives and improve sustainability performance, it would not provide the greatest overall reduction in environmental impacts among the development alternatives.

6.6 - Alternative 3: Reduced Building Footprint with Expanded Landscape Buffer Alternative

This alternative would reconfigure the site plan to reduce the total building area to approximately **475,000 square feet** and expand landscape setbacks along Amargosa Road and Palmetto Way. Trailer parking would be reduced, and landscape coverage would increase from approximately 19 percent to about 25 percent of the site area.

6.6.1 - Impact Analysis

This alternative would slightly reduce development intensity and increase landscaped areas.

Air Quality

A minor reduction in construction activity and operational intensity would result in slightly lower emissions compared to the proposed Project. However, because the reduction in building area is limited, overall emissions would be similar. Air quality impacts would remain less than significant.

Greenhouse Gas Emissions

GHG emissions would be marginally reduced due to slightly lower building area and reduced operational demand. However, the reduction would not be substantial enough to bring emissions below the applicable significance threshold. GHG impacts would remain significant and unavoidable.

Transportation (Vehicle Miles Traveled)

This alternative would result in minimal reductions in VMT, as the overall operational characteristics of the site would remain largely unchanged. Freight activity and employee commute patterns would be similar to the proposed Project. Therefore, VMT impacts would remain significant and unavoidable.

This alternative would provide localized environmental benefits including increased landscaping, reduced impervious surface area, and minor improvements to stormwater management and noise buffering.

Ability to Meet Project Objectives

This alternative would meet most of the Project objectives and could enhance community compatibility through improved aesthetics and landscaping. However, the slight reduction in building area may limit operational efficiency or tenant flexibility.

Feasibility

The alternative is feasible and could be implemented without substantial design or entitlement constraints.

Conclusion

The Reduced Building Footprint with Expanded Landscape Buffer Alternative would provide modest improvements in visual and site design-related impacts but would not substantially reduce GHG or VMT impacts. It would not be environmentally superior to other development alternatives.

6.7 - Environmentally Superior Alternative

CEQA Guidelines §15126.6(e)(2) require that an EIR identify the environmentally superior alternative a n h se analy ed. he r ec Al erna ive is de er ined e envir n en ally s peri r he R must also identify an environmentally superior alternative among the other feasible alternatives.

The environmentally superior alternative is the one that would avoid or substantially lessen one or more of the Project's significant environmental effects while still achieving most of the Project's basic objectives.

The No Project Alternative is the environmentally superior alternative because it would avoid all environmental impacts associated with development of the site.

Therefore, while the No Project Alternative is environmentally superior overall, the Reduced Intensity Industrial Alternative is identified as the environmentally superior development alternative because it would result in the greatest reduction in significant impacts related to greenhouse gas (GHG) emissions and vehicle miles traveled (VMT), while remaining feasible and meeting most of the Project objectives.

Table 6.6-1: Comparison of Alternatives to the Proposed Project

Alternative	Building Area / Features	General Description	Impact Reduction Focus	Consistency with CIBP / Project Land Use	Meets Project Objectives?	Avoids Significant and Unavoidable VMT Impact?	Reduces GHG Impact?
Proposed Project	499,714 sq. ft.; 72 loading docks, 171 tractor-trailer stalls, 311 parking spaces	Full buildout of industrial/warehouse facility with associated infrastructure, parking, and landscaping	Baseline for comparison	Yes	Fully	No	No
No Project Alternative	0	No development; site remains vacant and underutilized	All environmental impacts avoided	Yes (no change)	No	Yes	Yes

Alternative	Building Area / Features	General Description	Impact Reduction Focus	Consistency with CIBP / Project Land Use	Meets Project Objectives?	Avoids Significant and Unavoidable VMT Impact?	Reduces GHG Impact?
Alternative 1: Reduced Intensity Industrial	350,000 sq. ft.; proportionally fewer loading docks and parking spaces	Smaller-scale industrial/warehouse development, maintaining general layout	Construction emissions, GHG, grading, VMT moderately reduced	Yes	Mostly	No	Yes (but not below threshold)
Alternative 2: Enhanced TDM	499,714 sq. ft.; 72 loading docks, 171 tractor-trailer stalls, 311 parking spaces with EV charging, TDM programs, bicycle/pedestrian facilities	Same building size as Proposed Project with enhanced sustainability and mobility measures	GHG, VMT, operational emissions reduced, but remain significant and unavoidable	Yes	Fully	No (impacts reduced but still significant)	Yes (but not below threshold)
Alternative 3: Reduced Footprint with Expanded Landscape Buffer	475,000 sq. ft.; fewer trailer stalls; increased landscape coverage (~25% of site)	Reconfigured site with larger landscaped setbacks and modest building reduction	Visual quality, hydrology, noise, stormwater improvements	Yes	Mostly	No	Minimal

SECTION 7: OTHER CEQA CONSIDERATIONS

7.1 - Significant Unavoidable Impacts

CEQA Guidelines §15126.2(b) require that an Environmental Impact Report (EIR) identify and discuss significant environmental effects that cannot be avoided if a project is implemented, even with the incorporation of feasible mitigation measures. These are impacts that may be reduced in severity through mitigation but cannot be reduced to a less-than-significant level. Although the EIR evaluates alternatives that reduce project intensity or footprint, no alternative was identified that would fully avoid this impact without compromising the basic objectives of the Project, such as providing employment-generating industrial uses, supporting goods movement, and implementing planned land use designations. As a result, the impact remains significant and unavoidable.

This section describes those significant and unavoidable impacts associated with implementation of the proposed Project. It also provides a summary of the rationale for proceeding with the Project despite the adverse effect.

Air Quality

Air quality impacts associated with construction and operation of the Project were evaluated in this EIR and determined to be less than significant. Although concerns regarding air quality were raised during the Notice of Preparation (NOP) process, technical analysis demonstrates that emissions of criteria pollutants and toxic air contaminants would not exceed applicable thresholds established by the Mojave Desert Air Quality Management District (MDAQMD). Therefore, air quality is not identified as a significant and unavoidable impact.

Greenhouse Gas Emissions

The proposed Project would result in a significant and unavoidable impact related to greenhouse gas (GHG) emissions. Based on the Greenhouse Gas Analysis prepared for the Project (Appendix X), total construction and operational emissions are estimated at approximately 4,894.17 metric tons of carbon di xide e ivalen (MT O e) per year, amortized over a 30-year period consistent with guidance from the Mojave Desert Air Quality Management District (MDAQMD) and the South Coast Air Quality Management District (SCAQMD).

This level of emissions exceeds the SCAQMD-rec ended screenin hresh ld MT O e per year for industrial projects. Therefore, the Project would have a cumulatively considerable contribution to climate change and would result in a significant impact under CEQA.

The Project incorporates feasible GHG reduction measures consistent with applicable regulations and best practices including:

- Compliance with Title 24 Building Energy Efficiency Standards;
- Implementation of CALGreen requirements;
- Installation of EV-capable and EV-ready parking spaces;
- Energy-efficient building design and operational features; and
- Transportation Demand Management (TDM) strategies to reduce vehicle trips.

While these measures would reduce overall GHG emissions, they would not be sufficient to reduce emissions below the applicable significance threshold. The impact is primarily driven by the scale of the Project and regional travel behavior associated with goods movement, which cannot be fully mitigated at the project level.

As a result, even with implementation of all feasible mitigation measures, the Project's GHG impact would remain significant and unavoidable under CEQA.

Vehicle Miles Traveled (VMT)

The proposed Project would result in a significant and unavoidable impact related to Vehicle Miles Traveled (VMT). Based on the VMT analysis prepared in accordance with the City of Hesperia Transportation Impact Analysis Guidelines, the Project is expected to exceed the County's adopted VMT thresholds. Specifically, the Project's VMT per capita would surpass the County's significance thresholds across all metrics evaluated.

In accordance with CEQA and SB 743, projects that exceed VMT thresholds are required to implement feasible mitigation. The proposed Project includes Mitigation Measures project specific TDM measures identified in Section 5.0, which consist of a range of Transportation Demand Management (TDM) strategies, such as:

- Coordination with the regional and local transit providers
- Encouraging pedestrian and bicycle connectivity
- Supporting future transit infrastructure
- Promoting complete streets concepts
- Reducing vehicle trips through design and land use integration

While these measures are intended to reduce Project-generated VMT, their effectiveness cannot be guaranteed at the project level. The ultimate success of many TDM measures depends on external regional factors beyond the Project's control, such as fuel prices, transit availability, and regional transportation policy (e.g., a VMT-based fee or gas tax). Traditional transportation improvements, such as roadway widening or intersection improvements, do not reduce VMT and therefore do not mitigate impacts under CEQA Guidelines Section 15064.3.

As a result, even with mitigation, the Project's VMT impact is expected to remain above the County's threshold, and is therefore considered significant and unavoidable under CEQA.

Implications and Statement of Overriding Considerations

Although the VMT impact cannot be fully mitigated, the Project is proposed because it achieves key planning and policy objectives, including:

- Advancing local and regional development goals
- Supporting regional goods movement and logistics operations
- Providing employment opportunities within the City
- Facilitating development consistent with planned industrial land uses
- Contributing to the City's economic base and tax revenues

In accordance with CEQA Guidelines §15093, the lead agency must adopt a Statement of Overriding Considerations at the time of Project approval to document its decision to proceed in light of this unavoidable impact.

7.2 - Growth-Inducing Impacts

CEQA Guidelines §15126.2(d) require that an Environmental Impact Report (EIR) discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. A project may also be growth-inducing if it removes obstacles to growth, such as by extending utilities or roads into previously undeveloped areas. Growth-inducing impacts are not necessarily adverse but must be disclosed where a project could facilitate or accelerate development.

Growth-inducing impacts are typically characterized as either direct or indirect:

- **Direct growth-inducing impacts** result from the immediate development of employment-generating or population-supporting land uses that contribute directly to economic or demographic growth
- **Indirect growth-inducing impacts** occur when a project extends infrastructure (e.g., roads, water, sewer, storm drainage, or power) or removes other constraints, thereby facilitating or accelerating future development in adjacent or nearby areas.

Project Evaluation

The proposed Project involves construction and operation of a 499,714-square-foot industrial warehouse facility, including approximately 10,000 square feet of office space, on a 30.52-acre site within the City of Hesperia. The Project would accommodate approximately 500 to 600 employees at full operation.

The Project represents a direct employment-generating use that would contribute to economic growth in the region by creating new industrial and logistics jobs, supporting local goods movement, and increasing the City's commercial tax base. While the Project site is currently designated Regional Commercial (RC) under the Main Street and Freeway Corridor Specific Plan, the proposed General Plan Amendment and Zone Change would redesignate the site to Commercial/Industrial Business Park (CIBP) to accommodate the planned warehouse use.

This change is consistent with the City's long-term planning vision for the Amargosa Road corridor, which encourages the transition of underutilized commercial parcels to employment-generating industrial uses that support regional logistics and distribution activities. Accordingly, the Project's contribution to growth would represent anticipated urban development consistent with evolving City land use policies and would not constitute unplanned or speculative growth under CEQA.

The Project does not include residential components and would therefore not directly induce population growth. Any increase in population would be indirect, resulting from potential in-migration of workers employed at the facility, which would be minor relative to the City's overall population and employment base and consistent with regional growth projections.

Infrastructure and Indirect Growth Potential

The Project includes necessary on-site and off-site infrastructure improvements to serve the proposed industrial use. These include:

- Extension of water, sewer, and stormwater facilities from existing service lines adjacent to the site;
- Frontage improvements along Palmetto Way, including curb, gutter, sidewalk, and landscape enhancements, and landscape improvements along Avenal Street frontage only; and
- Utility extensions (electricity, gas, and telecommunications) consistent with standard development requirements for industrial parcels within the City.

These improvements are limited in scope and designed solely to support the Project. They do not provide excess capacity that would enable or induce new development on surrounding properties beyond what is already allowed under the City's General Plan and Specific Plan. Furthermore, the Project area is already served by surrounding infrastructure networks, and the site is located within a fully urbanized and planned service area.

Because the Project's infrastructure extensions are proportionate to the needs of the development and occur within an area already designated for urban use, they would not remove a barrier to growth or facilitate development in previously undeveloped areas.

Economic Development and Employment Effects

The Project would generate short-term construction employment and long-term operational employment associated with warehouse and distribution activities. These new jobs would have a beneficial economic effect by increasing local employment opportunities and supporting Hesperia's industrial and logistics sector.

While the Project may attract ancillary services—such as vehicle maintenance, logistics support, or nearby food and retail uses—these potential secondary effects would occur within areas already zoned for such development. Consequently, the Project's contribution to economic growth would be incremental and consistent with planned City development patterns.

Conclusion

The proposed Project would generate direct employment consistent with the City of Hesperia General Plan and the Main Street and Freeway Corridor Specific Plan, both of which anticipate industrial and commercial growth in this corridor. Infrastructure extensions associated with the Project are localized, proportionate to its operational needs, and confined within an already urbanized service area.

Accordingly, while the Project would contribute to planned economic and employment growth, it would not induce unanticipated population growth or facilitate development in previously unserved areas. Therefore, the Project's growth-inducing impacts would be considered less than significant under CEQA. The Project would not extend infrastructure into previously developed or unplanned areas.

7.3 - Significant Irreversible Environmental Changes

CEQA Guidelines §15126.2(c) require that an Environmental Impact Report (EIR) identify significant irreversible environmental changes that would result from a proposed project. Such changes may:

- Involve a large commitment of nonrenewable resources;
- Result in permanent land use conversion or commit future generations to a specific use; or
- Lead to irreversible environmental damage as a result of hazards or accidents.

Irreversible and irretrievable Commitment of Resources

Construction and operation of the proposed industrial warehouse facility would involve the long-term commitment of nonrenewable resources. These include:

- **Construction materials** such as aggregate, sand, gravel, cement, asphalt, lumber, steel, copper, and plastics;
- **Energy resources** such as electricity and fossil fuels required for construction equipment, transportation of materials, and long-term facility operation;
- **Water resources** for dust suppression, concrete curing, landscape establishment, and ongoing maintenance; and
- **Manufactured materials** including glass, insulation, and piping products.

While operational emissions would contribute to regional air quality and greenhouse gas emissions, such impacts are addressed in Section 5.0 and are not considered irreversible environmental damage. These resource demands are typical of large-scale industrial development and do not involve the use of materials or energy in unusual or excessive quantities relative to similar projects. Once expended, these nonrenewable resources are irretrievably committed to the development and operation of the Project.

Permanent Land Use Changes

The Project would permanently convert approximately 30.52 acres of vacant land into developed industrial use, including a 499,714-square-foot warehouse with associated loading docks, parking areas, and landscaped buffers. This change constitutes an irreversible commitment to urban and industrial use, precluding future return of the site to open space or undeveloped condition.

While the Project would alter the physical character of the site, this conversion is consistent with the City of Hesperia's long-term land use vision for the Main Street and Freeway Corridor Specific Plan area, which encourages employment-generating development along the Amargosa Road corridor.

Visual and Environmental Setting Alterations

Development of the Project would result in permanent changes to the site's visual and environmental setting, including:

- Introduction of large-scale industrial buildings and paved areas in place of undeveloped desert land;
- Changes to traffic patterns, particularly due to increased truck activity and employee commute trips;

- Long-term energy consumption and air pollutant emissions, including greenhouse gases associated with ongoing operations; and
- Incremental noise increases from truck movements, mechanical equipment, and loading operations.

These effects represent lasting changes to the physical environment but would be mitigated where feasible through design measures, landscaping, and operational best practices.

Hazardous Materials and Accident Potential

The Project does not propose uses that are inherently hazardous or pose a substantial risk of catastrophic environmental accidents. Limited quantities of hazardous materials (such as fuels, lubricants, cleaning solvents, and maintenance chemicals) would be stored and used on-site in accordance with applicable federal, state, and local regulations, including those enforced by the San Bernardino County Fire Department, Certified Unified Program Agency (CUPA).

Compliance with existing laws and implementation of standard safety procedures would ensure that no irreversible environmental damage would result from accidental releases of such materials.

Conclusion

Implementation of the Project would result in irreversible environmental changes associated with the permanent conversion of vacant land to industrial use and the long-term commitment of nonrenewable resources. These effects are typical of large-scale industrial development and are consistent with the City's adopted land use plans and economic development policies.

While the Project would permanently alter the site's visual and physical character and commit resources to an urban use, it would not result in irreversible environmental damage due to hazards or accidents, nor would it require the use of materials or energy in unusually large quantities compared to similar developments.

7.4 - Energy

Regulatory Framework

CEQA Guidelines Appendix F requires consideration of potential energy impacts that may result from implementation of a project. Specifically, an EIR must evaluate:

- The potential for wasteful, inefficient, or unnecessary consumption of energy;
- The project's consistency with applicable state and local energy efficiency standards;
- The extent to which the project could affect local or regional energy supplies or the development of renewable energy resources; and
- Opportunities for energy conservation that could reduce environmental impacts.

The Project would be subject to multiple regulatory programs designed to ensure efficient energy use, including the California Building Energy Efficiency Standards (Title 24, Part 6), the California Green Building

Standards Code (CALGreen, Title 24, Part 11), and applicable California Air Resources Board (CARB) regulations that limit vehicle idling and promote clean fleet technologies. Energy impacts are evaluated in the context of CEQA Guidelines Appendix F and incorporated into the overall environmental analysis.

Energy Demand During Construction

Construction of the proposed industrial warehouse facility would result in a temporary increase in energy demand, primarily associated with:

- Diesel fuel consumption for heavy-duty construction equipment (e.g., graders, loaders, dozers, cranes);
- Gasoline and diesel use for construction worker commuting and material delivery vehicles; and
- Electricity use for temporary lighting, power tools, and water pumps.

Construction activities would occur over a limited duration and are typical for industrial development of comparable scale. The Project does not propose any unusual or energy-intensive construction methods.

In addition:

- Contractors must comply with CARB's off-road diesel vehicle regulations and idling restrictions, minimizing unnecessary fuel use;
- Equipment would be required to meet Tier 4 Final emission and efficiency standards where applicable;
- Best management practices (BMPs) would be implemented to reduce idle times and optimize equipment use; and
- The Project would connect to existing utility infrastructure and would not require new or expanded energy generation or transmission facilities.

Accordingly, construction-related energy use would be considered typical, temporary, and less than significant.

Energy Demand During Operation

At full operation, the Project would function as a warehouse and distribution facility with approximately 10,000 square feet of office space. Operational energy demand would include:

- **Electricity** for warehouse lighting, office HVAC, security systems, and electric vehicle (EV) charging stations;
- **Natural gas** for space and water heating; and
- **Transportation fuels** for employee commute trips and goods movement by diesel and alternative-fuel trucks.

The Project incorporates multiple energy conservation features, including:

- Compliance with Title 24 energy efficiency standards for lighting, insulation, HVAC, and equipment performance;
- Compliance with CALGreen requirements for high-efficiency lighting, low-flow fixtures, and energy-efficient mechanical systems;
- Installation of EV-capable and EV-ready parking spaces in accordance with the California Green Building Code; and
- Transportation Demand Management (TDM) measures and routing efficiency programs to reduce unnecessary vehicle miles traveled and associated fuel use.

Energy consumption is directly related to greenhouse gas emissions and is considered in the Project's GHG analysis. The Project's operation would not require new regional energy generation capacity beyond that already planned for in regional forecasts. Electricity and natural gas demand would be served by Southern California Edison (SCE) and the Southwest Gas Corporation, both of which have adequate supply and infrastructure to meet the Project's needs.

Energy Infrastructure and Supply

The Project site is located within a fully serviced and urbanized area of the City of Hesperia. Electrical and natural gas utilities exist adjacent to the site and would be extended as part of standard site development. No new or expanded off-site energy facilities or major transmission infrastructure would be required.

Energy consumption associated with the Project would represent a small fraction of regional demand and would be consistent with growth projections already evaluated in local and regional energy planning documents, including SCAG's Connect SoCal Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Conclusion

Implementation of the Project would result in the irretrievable commitment of energy resources during both construction and operation. However, energy consumption would:

- Occur within the range typical for similar industrial developments;
- Not involve inefficient, wasteful, or unnecessary energy use;
- Not result in significant adverse effects on local or regional energy supplies; and
- Be consistent with all applicable state and local energy efficiency regulations.

Therefore, energy impacts associated with the Project would be less than significant under CEQA.

SECTION 8: EFFECTS FOUND NOT TO BE SIGNIFICANT

As part of the environmental review process, an Initial Study was prepared and circulated with the Notice of Preparation (NOP) in accordance with CEQA Guidelines Section 15063. The Initial Study was prepared for the Project and is included in Appendix N of this EIR.

The Initial Study evaluated the full range of environmental issue areas in the CEQA Environmental Checklist and concluded that many topics would result in no impact or less-than-significant impacts due to the nature, scope, and location of the proposed Project, or by virtue of compliance with existing regulatory standards and adopted plans. These issues were therefore not carried forward for further analysis in the EIR.

In addition, certain environmental topics were carried forward for analysis in this EIR based on agency and public comments received during the NOP review period, even where the Initial Study indicated potentially less-than-significant impacts. Detailed technical analysis contained in this EIR confirms that some of these topics would result in less-than-significant impacts.

Air Quality
Air Quality was identified as an area of concern during the NOP scoping process and was therefore evaluated in detail in this EIR. As documented in Section 5.0 (Environmental Analysis) and supported by the Air Quality Impact Assessment prepared for the Project, construction and operational emissions of criteria pollutants and toxic air contaminants would not exceed the applicable thresholds established by the Mojave Desert Air Quality Management District (MDAQMD). In addition, the Project would comply with all applicable federal, state, and regional regulations related to air quality, including implementation of standard construction best management practices. Therefore, air quality impacts are considered less than significant, and no mitigation measures are required.

Where mitigation measures were identified to reduce potentially significant impacts to less-than-significant levels, they have been incorporated into the Mitigation Monitoring and Reporting Program (MMRP) provided as Table 1.7-1 in the Section 1, Executive Summary of this EIR.

A complete summary of:

- Environmental topics found to have no impact or less-than-significant impacts is included in the Initial Study Appendices B and B1; and
- All mitigation measures identified to reduce potential impacts to a less-than-significant level are detailed in the MMRP (Section 1, Executive Summary of this EIR).

Because these environmental issues were determined to be less than significant- either though the Initial Study or through detailed analysis provided in this EIR- they are not discussed further in this Section.

SECTION 9: SIGNIFICANT UNAVOIDABLE IMPACTS

The California Environmental Quality Act (CEQA) Guidelines Section 15126(b) requires an Environmental Impact Report (EIR) to describe any significant environmental impacts of a proposed project, including those that can be mitigated but not reduced to a less-than-significant level. Where significant impacts cannot be feasibly avoided or reduced without substantially altering the Project or its objectives, the EIR must identify those impacts and explain the reasons why the Project is being proposed notwithstanding those effects.

Section 5.0 of this EIR provides a comprehensive evaluation of the potential environmental impacts associated with implementation of the proposed Project and identifies applicable General Plan policies, standard regulatory requirements, and mitigation measures intended to avoid or minimize environmental effects. With incorporation of these measures, most potentially significant impacts would be reduced to a less-than-significant level.

However, as discussed in Section 5.0, certain impacts cannot be feasibly mitigated to a less-than-significant level without fundamentally altering the nature or objectives of the Project. These impacts are therefore considered significant and unavoidable.

The following significant and unavoidable impacts would result from implementation of the proposed Project:

Transportation (Vehicle Miles Traveled - VMT)

- The Project would conflict with CEQA Guidelines Section 15064.3, subdivision (b), as it would generate vehicle miles traveled (VMT) in excess of the City's adopted threshold of significance. Although transportation demand management (TDM) measures are recommended, no feasible mitigation measures have been identified that would reduce VMT impacts to a less-than-significant level.

Greenhouse Gas Emissions

- The Project would generate greenhouse gas (GHG) emissions that exceed the applicable threshold e ric ns O e per year. hile i i a i n eas res are inc rp ra ed red ce emissions, the Project would remain above the threshold, and impacts would be significant and unavoidable.

- The Project would conflict with applicable plans, policies, or regulations adopted for the purpose of reducing greenhouse gas emissions. Although the Project is generally consistent with statewide and local reduction strategies, it would still exceed the applicable numeric threshold, and impacts would remain significant and unavoidable.

Pursuant to CEQA Guidelines Section 15093, approval of the Project would require the decision-making body to adopt a Statement of Overriding Considerations, finding that specific economic, legal, social, technological, or other benefits of the Project outweigh these unavoidable adverse environmental effects.

SECTION 10: REFERENCES

10.1 - Lead Agency

City of Hesperia

Planning Division

9700 Seventh Avenue

Hesperia, CA 92345

Edgar Gonzalez, Senior Planner.

CASC Engineering & Consulting, Inc. (Lead EIR Consultant)

Frank Coyle, Director of Planning

Anthony Mistretta, Director of Engineering

Jessie Bruckhart, Senior Planner

Ben Hamada, GIS Specialist

Kacey Reineman, Assistant Planner

Urban Crossroads, Inc. (Air Quality, Greenhouse Gas, Energy, Noise)

Haseeb Qureshi, Principal

Shannon Wong

Bill Maddux, INCE

Noah Johnson

Gandinni Group Inc. (Traffic, Trip Generation, VMT)

Bryan Crawford

Giancarlo Ganddini, PE, PTP

SoCal Geotechnical (Geotechnical Reports)

Joseph Leon, Project Engineer

Robert Trazo, Principal Engineer

CRM TECH (Cultural Reports)

Brian Glenn, M.A., RPA - Archaeologist

Osprey Environmental Associates (Bio Reports)

Westland Group, Inc. (Hydrology Reports)

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Appendix A – Air Quality Impact Analysis

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE

Air Quality Impact Analysis

Prepared By:

Haseeb Qureshi | hqureshi@urbanxroads.com
Shannon Wong | swong@urbanxroads.com

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Agency
City of Hesperia

Date
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LIST OF ABBREVIATED TERMS

%	Percent
µg/m^3	Microgram per Cubic Meter
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
2016-2040 RTP/SCS	2016-2040 Regional Transportation Plan/Sustainable Communities Strategy
AB 2595	California Clean Air Act
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
C_2Cl_4	Perchloroethylene
C_4H_6	1,3-butadiene
C_6H_6	Benzene
C_2H_3Cl	Vinyl Chloride
C_2H_4O	Acetaldehyde
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guidelines	CEQA Statute and Guidelines
CH_2O	Formaldehyde
City	City of Hesperia
CO	Carbon Monoxide
COH	Coefficient of Haze
COHb	Carboxyhemoglobin
Cr(VI)	Chromium
EIR	Environmental Impact Report
EMFAC	Emissions FACtor Model
EPA	Environmental Protection Agency
EV	Electric Vehicle
GHG	Greenhouse Gas
H_2S	Hydrogen Sulfide
HI	Hazard Index
hp	Horsepower
lbs.	Pounds
lbs./day	Pounds Per Day

MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measures
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_2	Oxygen
O_3	Ozone
O_2 Deficiency	Chronic Hypoxemia
Pb	Lead
PM	Particulate Matter
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
ppm	Parts Per Million
Project	Amargosa and Palmetto High-Cube Warehouse
RECLAIM	Regional Clean Air Incentives Market
ROG	Reactive Organic Gases
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SIPs	State Implementation Plans
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
TAC	Toxic Air Contaminant
Title 24	California Building Code
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
VOC	Volatile Organic Compounds

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis (AQIA) are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the CEQA Guidelines (CEQA Guidelines) (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.6	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.7	*Less Than Significant*	*n/a*
Sensitive Receptors	3.8	*Less Than Significant*	*n/a*
Odors	3.9	*Less Than Significant*	*n/a*
Cumulative Impacts	3.10	*Less Than Significant*	*n/a*

ES.2 REGULATORY REQUIREMENTS

The Mojave Desert Air Quality Management District (MDAQMD) has implemented various rules and regulations to control air pollution sources within the Mojave Desert Air Basin (MDAB) and to support air quality standards for land use development projects. The following rules that are currently applicable during construction activity for this Project are described below:

MDAQMD Rule 403

The purpose of this rule is to reduce the amount of particulate matter less than 10 microns (PM_{10}) entrained in the ambient air from anthropogenic fugitive dust sources within the MDAQMD by requiring actions to prevent, reduce, or mitigate fugitive dust. The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (2).

- Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance.
- Take actions sufficient to prevent project-related trackout onto paved surfaces.

MDAQMD Rule 1113

The purpose of this rule is to limit the quantity of volatile organic compounds (VOC) in architectural coatings. The following measure shall be incorporated into Project plans and specifications as implementation of MDAQMD Rule 1113 (3).

- Only "Low-VOC" paints consistent with MDAQMD Rule 1113 shall be used.

ES.3 Construction-Source Mitigation Measures

Project construction emissions would not exceed applicable MDAQMD regional thresholds of significance. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

ES.4 Operational-Source Mitigation Measures

Project operational emissions would not exceed applicable MDAQMD regional thresholds of significance. Therefore, Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

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1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Amargosa and Palmetto High-Cube Warehouse (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the MDAQMD.

1.1 SITE LOCATION

The proposed project is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,714 square high-cube fulfillment center warehouse building as shown on Exhibit 1-2. The proposed project is anticipated to be constructed and fully operational by year 2027.

It is expected that the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related emission sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, stationary and on-site cargo handling equipment. This analysis is intended to describe air quality impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

EXHIBIT 1-A: LOCATION MAP

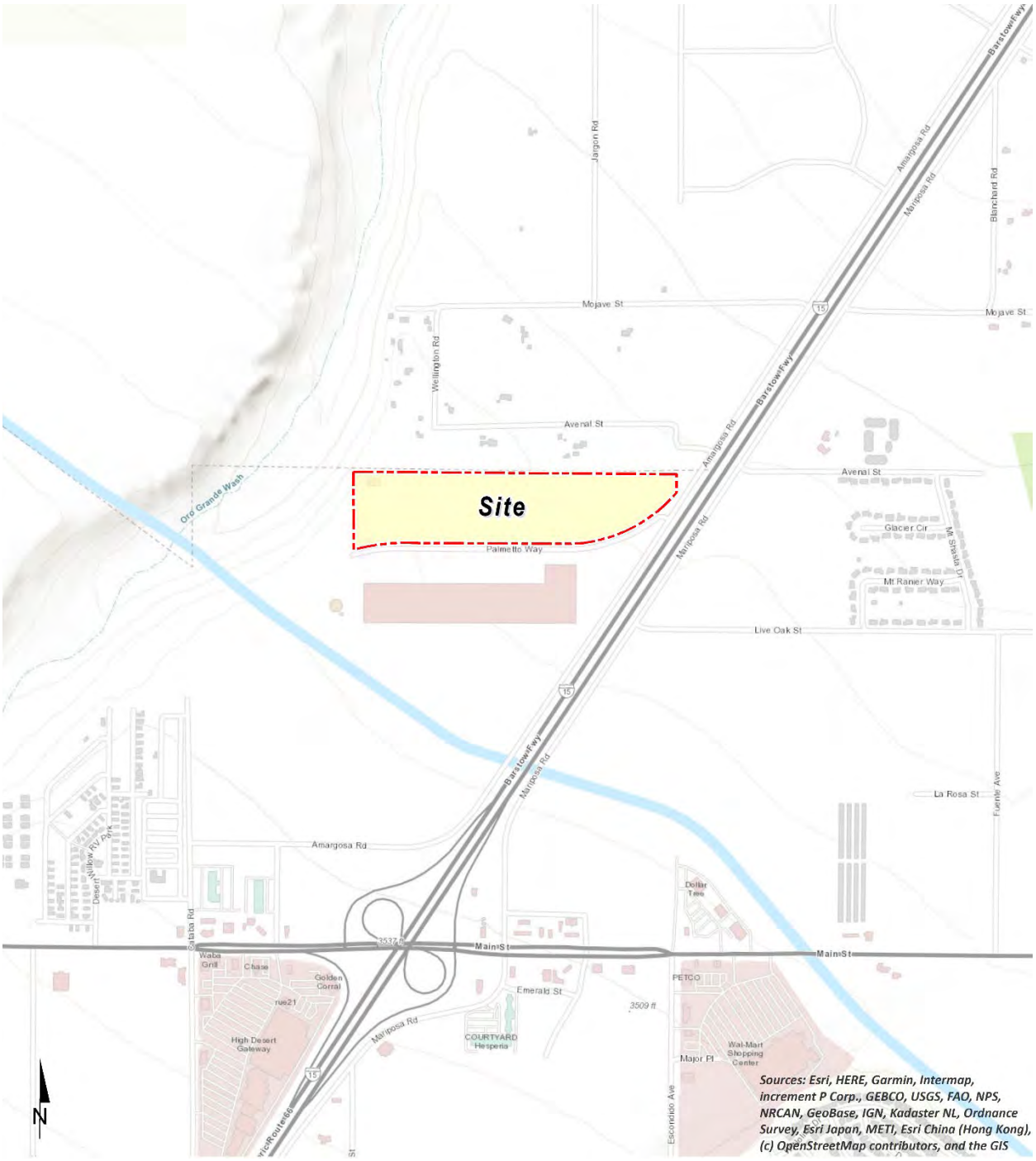
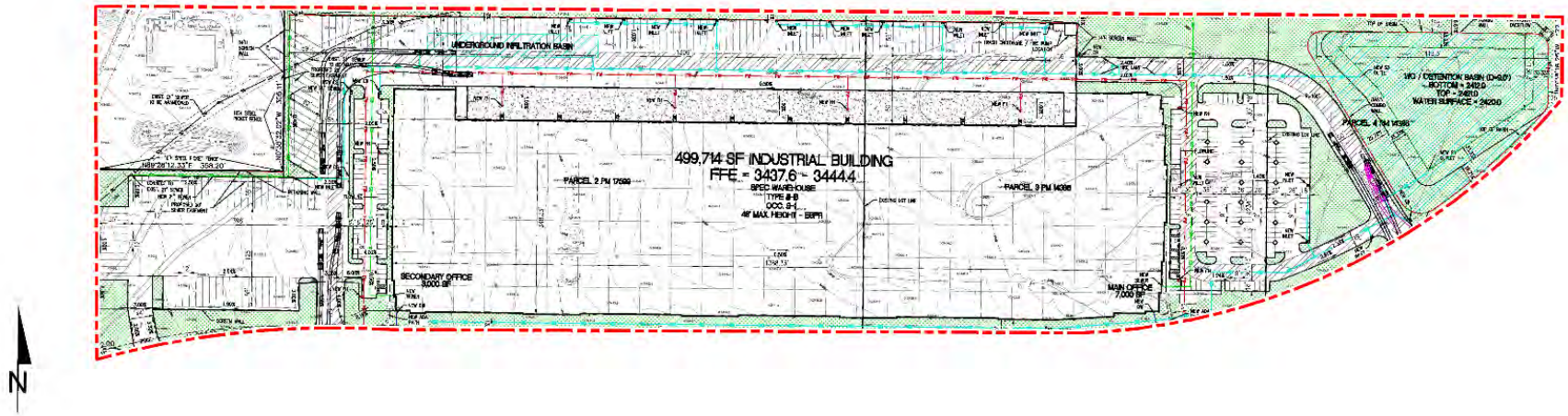


EXHIBIT 1-B: SITE PLAN



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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 MOJAVE DESERT AIR BASIN

The Project site is located in the portion of the City of Hesperia in San Bernardino County that is part of the MDAB and is under the jurisdiction of the MDAQMD. The air quality assessment for the Project evaluates emissions impacts associated with short-term construction and long-term operation of the Project. A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the MDAQMD, have created guidelines and requirements to conduct air quality analyses. The MDAQMD's current guidelines, included in its *California Environmental Quality Act and Federal Conformity Guidelines* (August 2016), were adhered to in the assessment of air quality impacts for the Project.

2.2 REGIONAL CLIMATE

Air quality in the Project area is not only affected by various emissions sources (mobile, industry, etc.) but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall.

The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains within the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and Central California valley regions by mountains (highest elevation is approximately 10,000 feet), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, to indicate that at least three months have maximum average temperatures over 100.4° F.

Snow is common above 5,000 feet in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 feet, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During

late summer, moist high-pressure systems from the Pacific collide with rising heated air from desert areas, resulting in brief, high-intensity thunderstorms that can cause high winds and localized flash flooding.

2.3 AIR POLLUTANTS

2.3.1 Criteria Pollutants

Air quality regulations were first promulgated with the Federal Clean Air Act (CAA) of 1970. Air quality is defined by ambient air concentrations of seven "criteria air pollutants," which are a group of common air pollutants identified by the U.S. EPA to be of concern with respect to the health and welfare of the general public. Federal and State governments regulate criteria air pollutants by using ambient standards based on criteria regarding the health and/or environmental effects of each pollutant. The seven "criteria" air pollutants defined by the U.S. EPA are: (1) carbon monoxide (CO); (2) sulfur dioxide (SO_2); (3) nitrogen dioxide (NO_2); (4) ozone (O_3); (5) particulate matter less than 10 microns (PM_{10}); (6), fine particulate matter less than 2.5 microns ($PM_{2.5}$); and (7) lead (Pb). Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (4).

TABLE 2-1: CRITERIA POLLUTANTS (1 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike O_3, motor vehicles operating at slow speeds are the primary source of CO in the MDAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO.

TABLE 2-1: CRITERIA POLLUTANTS (2 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
CO (continued)			Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants are referred to as sulfur oxides (SO_X).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels.

TABLE 2-1: CRITERIA POLLUTANTS (3 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
SO_2 (continued)			In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
NO_2	NO_2 is a key component of NO_X, which also includes nitric oxide (NO) and nitrous oxide (N_2O). NO_X compounds are primarily produced during combustion processes when nitrogen (N_2) reacts with oxygen (O_2). Both NO and NO_2 serve as precursors in the formation of O_3 and $PM_{2.5}$, making their monitoring crucial for air quality assessments. NO_2, being the more abundant form of NO_X in the atmosphere, has a relatively short lifespan of one to seven days, which enhances its significance as a major air pollutant. As a criteria air pollutant, NO_2 poses various health risks, including respiratory issues and increased vulnerability to infections. It also absorbs blue light, imparting a brownish-red hue to the atmosphere and contributing to reduced visibility and smog formation. Given that NO emissions largely convert to NO_2, the examination of NO_X emissions becomes essential when assessing potential air quality impacts.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions.

TABLE 2-1: CRITERIA POLLUTANTS (4 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
NO_2 (continued)	The concentrations of NO_2 are closely related to traffic density, often resulting in higher exposure levels for commuters in heavy traffic compared to what regional monitoring stations may indicate.		The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when ROGs and NO_X react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and reside in communities with high O_3 levels.

TABLE 2-1: CRITERIA POLLUTANTS (5 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
O_3 (continued)			O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles).	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X, organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the U.S. and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer.

TABLE 2-1: CRITERIA POLLUTANTS (6 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
Particulate Matter (continued)	These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.		Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
Pb	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

TABLE 2-1: CRITERIA POLLUTANTS (7 OF 7)

Criteria Pollutant	Description	Sources	Health Effects
Pb (continued)			Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

2.3.2 Additional Pollutants

The MDAQMD's primary focus is to achieve the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for criteria pollutants. However, it also has a broader mandate to control emissions of air contaminants and safeguard public health. As a result, MDAQMD regulates additional pollutants beyond criteria pollutants, including reactive organic gases (ROGs), VOCs, and odors. Additional pollutants, their typical sources, and health effects are identified below (4).

TABLE 2-2: ADDITIONAL POLLUTANTS (1 OF 3)

Pollutant	Description	Sources	Health Effects
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air.	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer.

TABLE 2-2: ADDITIONAL POLLUTANTS (2 OF 3)

Pollutant	Description	Sources	Health Effects
VOC (continued)	VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	Not all VOCs have all these health effects, though many have several.
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.

TABLE 2-2: ADDITIONAL POLLUTANTS (3 OF 3)

Pollutant	Description	Sources	Health Effects
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (5).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.4 EXISTING AIR QUALITY

Existing air quality is measured at established MDAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-3 (6).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on July 16, 2024, and are presented in Table 2-3. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the Air District meets the standards set by the U.S. EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the U.S. EPA will designate the area as a maintenance area (7).

TABLE 2-3: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	9.0 µg/m^3	15.0 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

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TABLE 2-3: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On February 7, 2024, the national annual PM2.5 primary standard was lowered from 12.0 $\mu g/m^3$ to 9.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15.0 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (7/16/24)**

2.5 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for seven of the most common air pollutants: CO, Pb, O_3, PM_{10}, $PM_{2.5}$, NO_2, and SO_2 which are known as criteria pollutants. The MDAQMD monitors levels of various criteria pollutants at 35 permanent monitoring stations and 2 single-pollutant source Pb air monitoring sites throughout the air district (8). On January 25, 2024, CARB adopted the proposed 2023 amendments to the state and national area designations. See Table 2-4 for attainment designations for the MDAB (9). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the MDAB.

TABLE 2-4: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE MDAB

Criteria Pollutant	State Designation	Federal Designation
O_3 - 1-hour standard	Nonattainment	--
O_3 - 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassifiable/Attainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Attainment	Unclassifiable/Attainment
PB[1]	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the MDAB and SDAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for O_3 and PM_{10} was obtained from the MDAQMD Hesperia-Olive Street monitoring station, located approximately 5.08 miles east of the project site in Hesperia. As data for NO_2 and $PM_{2.5}$ were unavailable at this monitoring station, the next nearest monitoring station, MDAQMD Victorville-Park Avenue located 5.75 miles northeast, was utilized to report air quality data. It should be noted that data from the Victorville-Park Avenue monitoring station was utilized in lieu of the Hesperia-Olive Street monitoring station only in instances where data was not available. Additionally, it should be noted that data for CO was not available at MDAQMD Hesperia-Olive Street nor the nearest alternative monitoring stations.

The most recent three (3) years of data available is shown in Table 2-5 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, NO_2, PM_{10}, and $PM_{2.5}$ was obtained using the CARB iADAM: Air Quality and Data Statistics and the Air Quality and Meteorological Information System (AQMIS) (10) (11). Data for SO_2 has been omitted as attainment is regularly met and few monitoring stations measure SO_2 concentrations. It should be noted that the table is provided for informational purposes.

TABLE 2-5: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2022-2024

Pollutant	Standard	Year		
		2022	2023	2024
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.108	0.110	0.121
Maximum Federal 8-Hour Concentration (ppm)		0.090	0.097	0.106
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	11	11	14
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	52	54	70
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	N/A	N/A	N/A
Maximum Federal 8-Hour Concentration	> 20 ppm	N/A	N/A	N/A
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.054	0.060	0.057
Maximum State 1-Hour Concentration	> 0.180 ppm	0.053	0.060	0.057
Annual Federal Standard Design Value		13	11	11
Annual State Standard Design Value		12	12	12
Number of Days Exceeding Federal 1-Hour Standard	> 0.100 ppm	0	0	0
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
PM_{10}				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 150 µg/m^3	135.0	176.2	78.6
Annual Federal Arithmetic Mean (µg/m^3)		27.2	27.9	28.5
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m^3	0	1	0
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration (µg/m^3)	> 35 µg/m^3	24.6	25.6	40.7
Maximum State 24-Hour Concentration (µg/m^3)		24.6	25.6	40.7
Annual Federal Arithmetic Mean (µg/m^3)	>12 µg/m^3	8.9	7.9	9.0
Annual State Arithmetic Mean (µg/m^3)	>12 µg/m^3	9.0	7.9	N/A
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m^3	0	0	1

Source: CARB iADAM: Air Quality Data Statistics and AQMIS
ppm = Parts Per Million
µg/m^3 – microgram per cubic meter
N/A = data not available

2.7 REGULATORY BACKGROUND

2.7.1 Federal Regulations

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (12). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB. The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air

quality standards, the NAAQS, and specifies future dates for achieving compliance (13). The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (14) (15). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-4 (previously presented) provides the NAAQS within the MDAB. Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

2.7.2 California Regulations

CARB

CARB, which became part of CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the MDAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (16) (12). Local air quality management districts, such as the MDAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;

- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards that went into effect on January 1, 2026. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items (17):

Nonresidential Mandatory Measures

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitors, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 20% of the peak daily visitors, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. Acceptable bicycle parking facility for Sections 5.106.4.1.2.1, 5.106.4.1.2.2 and 5.106.4.1.2.3 shall be conveniently located near the street and shall meet one of the following:
    1) Covered, lockable enclosures with permanently anchored racks for bicycles;
    2) Lockable bicycle rooms with permanently anchored racks; or
    3) Lockable, permanently anchored bicycle lockers.

  Calculations for bicycle parking requirements shall be rounded up to the nearest whole number (5.106.4.1.2).
- Electric Vehicle (EV) charging stations. Construction to provide EV infrastructure and facilitate EV charging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2. EV charging stations and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 EV charging stations – Power allocation method and associated Table 5.106.5.3.6, and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.
- Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:
    1) The minimum requirements in the *California Energy Code* for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the *California Administrative Code*; and
    2) Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);

3) Uplight and Glare ratings as defined in *California Energy Code* (shown in Tables 130.2-A and 130.2-B in Chapter 8)
4) Allowable BUG ratings not exceeding those shown in Table 5.106.8, or
5) Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent (5.106.8).

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section
- 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1)
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

  1) Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
  2) Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  3) Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  4) Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Meters. For new buildings or additions in excess of 50,000 square feet, separate submeters shall be installed as follows (5.303.1.1):

  1) For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces

used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.

2) Where separate submeters for individual buildings tenants are unfeasible, for water supplied to the following subsystems:
    a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
    b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
    c. Steam and hot-water boilers with energy input more than 500,000 BTU/h (147 kW).

For excess consumption, a separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day (5.303.1.2).

- Commissioning. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.7.3 Regional Regulations

Air Quality Management Plan

Currently, the NAAQS and CAAQS are exceeded in most parts of the MDAB. The NAAQS, the Project region within the MDAB is in nonattainment for O_3 (8-hour) and PM_{10}. For the CAAQS, the Project region within the MDAB is in nonattainment for O_3 (1-hour and 8-hour) and PM_{10}. In response, the MDAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards (18). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.7.

2.8 Regional Air Quality Improvements

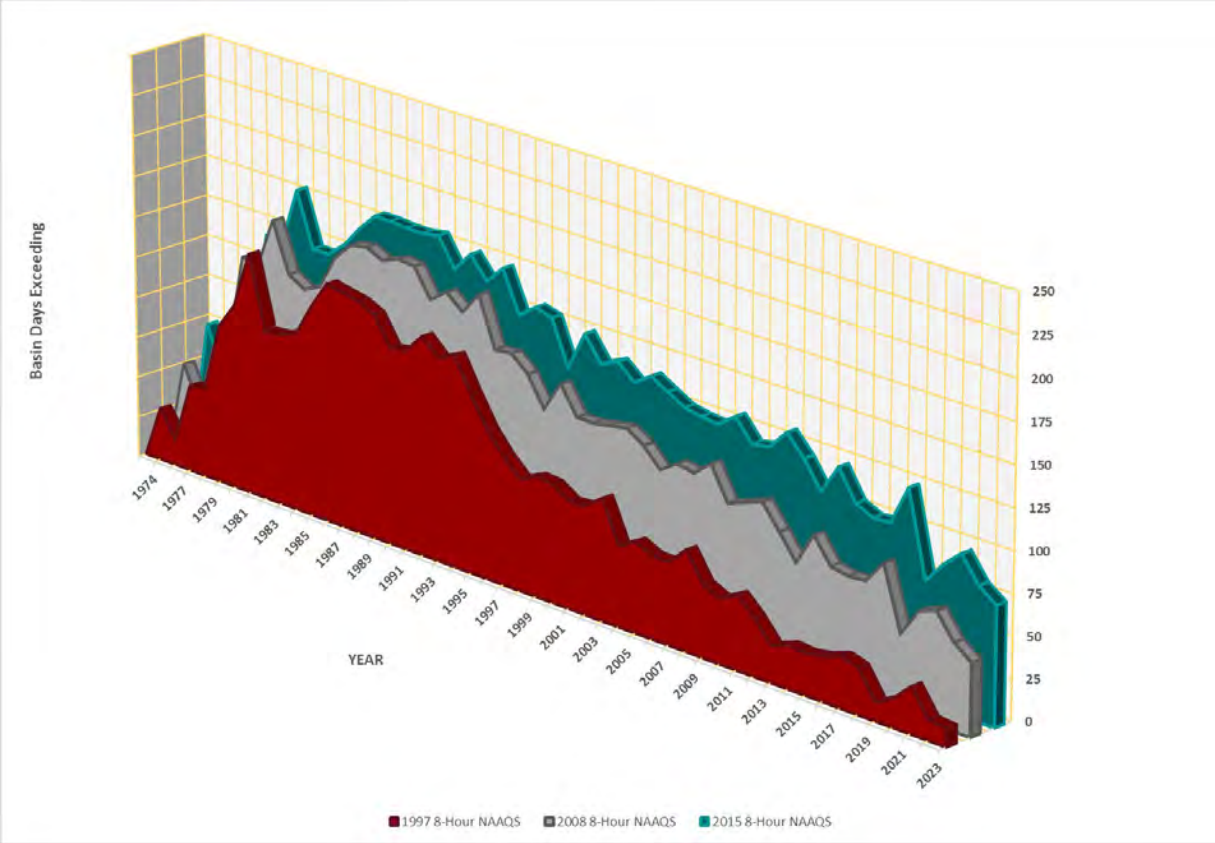
The Project is within the jurisdiction of the MDAQMD and is located in the Mojave Desert Air Basin (MDAB). MDAQMD rule development has resulted in improvement in air quality for the MDAB. Nearly all control programs developed through the early 2000s relied on (i) the development and application of cleaner technology; (ii) add-on emission controls, and (iii) uniform CEQA review throughout the MDAB. Industrial emission sources have been significantly reduced by this approach and vehicular emissions have been reduced by technologies implemented at the state level by CARB.

The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the MDAB improving over the course of the past decades.

Emissions of O_3, NO_X, and VOCs have been decreasing in the MDAB since 1975 (19). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the MDAB continue to increase, NO_X and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to use of

cleaner fuels and renewable energy. O_3 contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1975 and 2023. For 2023, there was an overall increase in exceedance days compared with the 1973 period. As shown in Table 2-6, O_3 levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding, O_3 levels in the MDAB have generally decreased over the last 30 years (20).

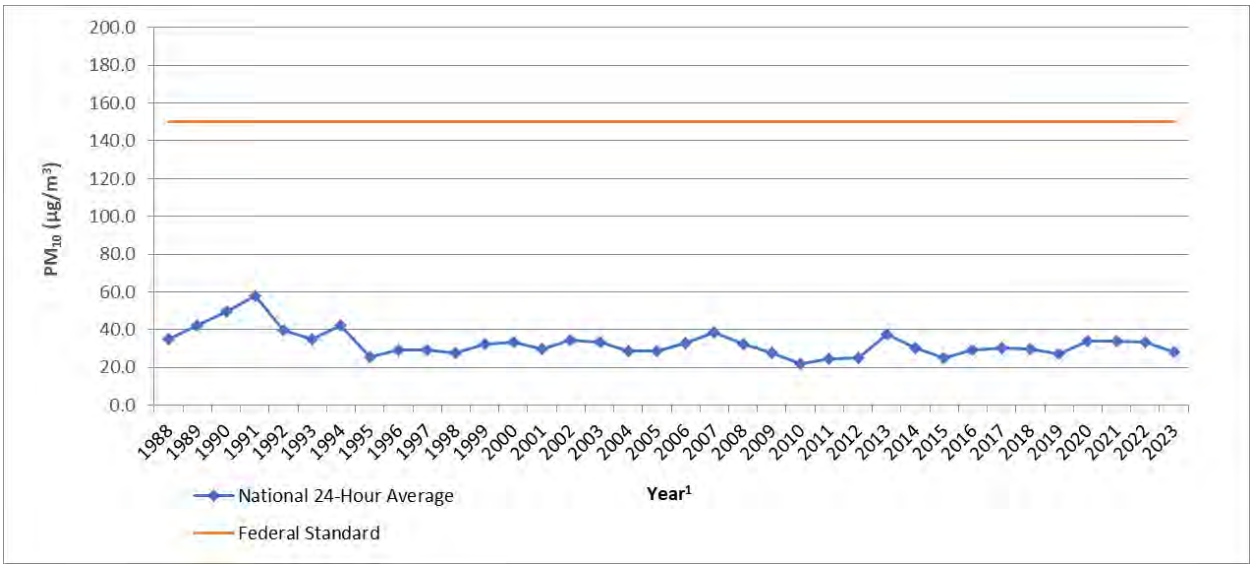
TABLE 2-6: MDAB O_3 TREND



Source: 2024 CARB, iADAM: Top Four Summary: PM10 24-Hour Averages (1973-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

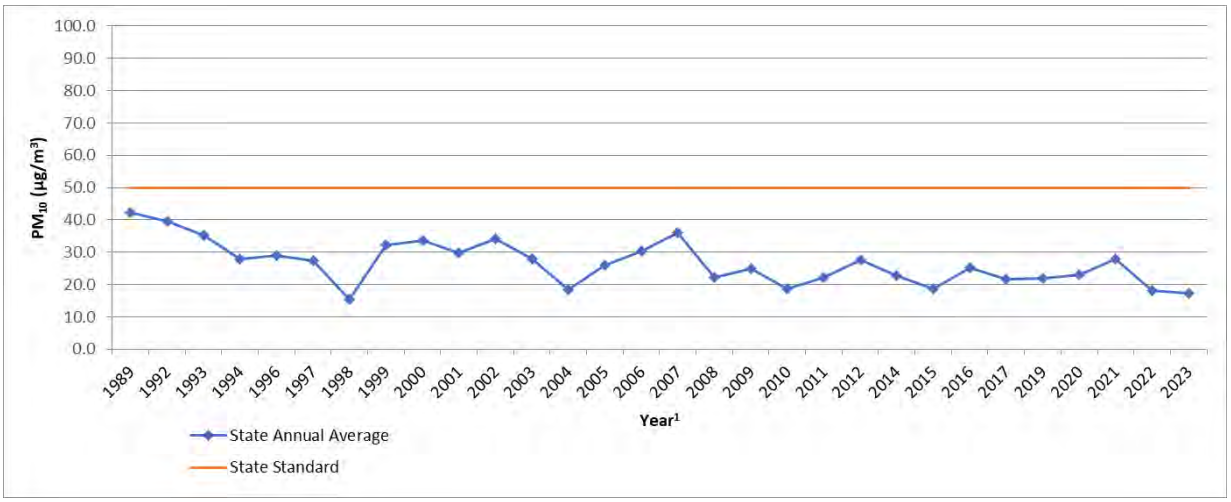
The most recent PM_{10} statistics show a slight improvement as illustrated in Tables 2-7 and 2-8. During the period for which data is available, the 24-hour national average concentration for PM_{10} decreased by approximately 18%, from 34.7 microgram per cubic meter (µg/m³) in 1988 to 28.4 µg/m³ in 2023 (20). The 24-hour state annual average concentration for PM_{10} has decreased by approximately 59%, from 42.4 µg/m³ in 1989 to 17.3 µg/m³ in 2023 (20).

TABLE 2-7: MDAB 24-HOUR AVERAGE CONCENTRATION PM_{10} TREND (BASED ON FEDERAL STANDARD)[1]



Source: 2024 CARB, iADAM: Top Four Summary: PM10 24-Hour Averages (1988-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

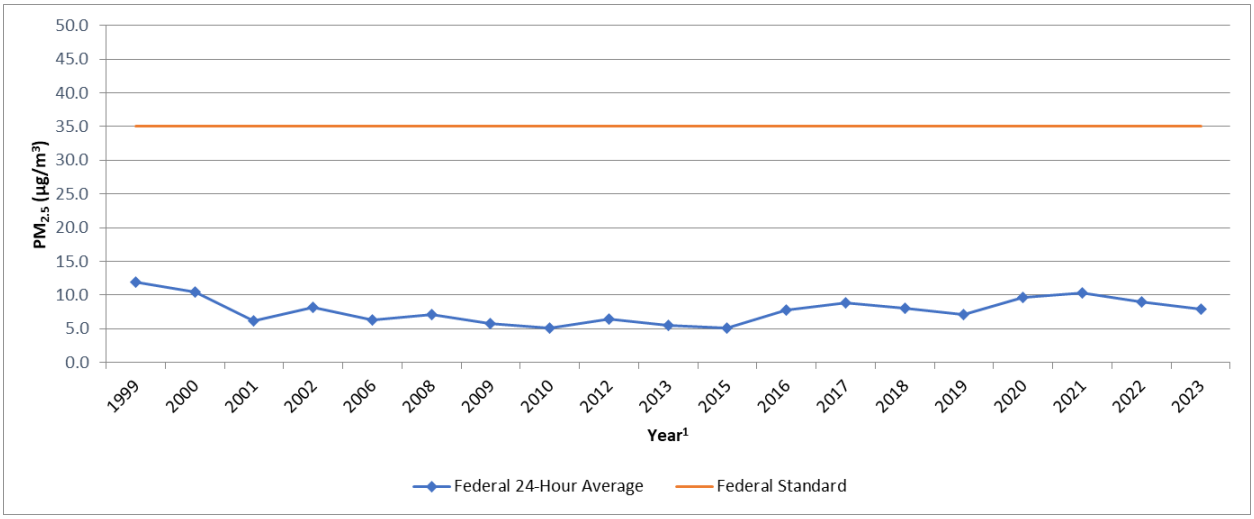
TABLE 2-8: MDAB ANNUAL AVERAGE CONCENTRATION PM_{10} TREND (BASED ON STATE STANDARD)[1]



Source: 2024 CARB, iADAM: Top Four Summary: PM10 24-Hour Averages (1989-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

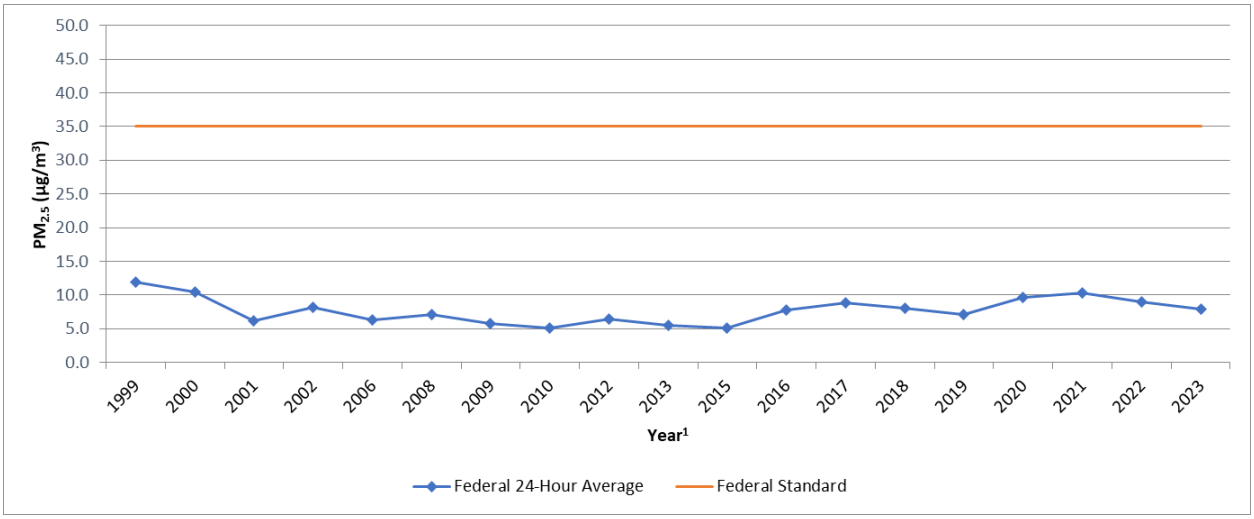
Tables 2-9 and 2-10 show the most recent average $PM_{2.5}$ concentrations in the MDAB from 1999 through 2023. Overall, the national and state annual average concentrations have decreased by almost 34% and 29%, respectively (20).

TABLE 2-9: MDAB 24-HOUR AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON FEDERAL STANDARD)[1]



Source: 2024 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1989-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

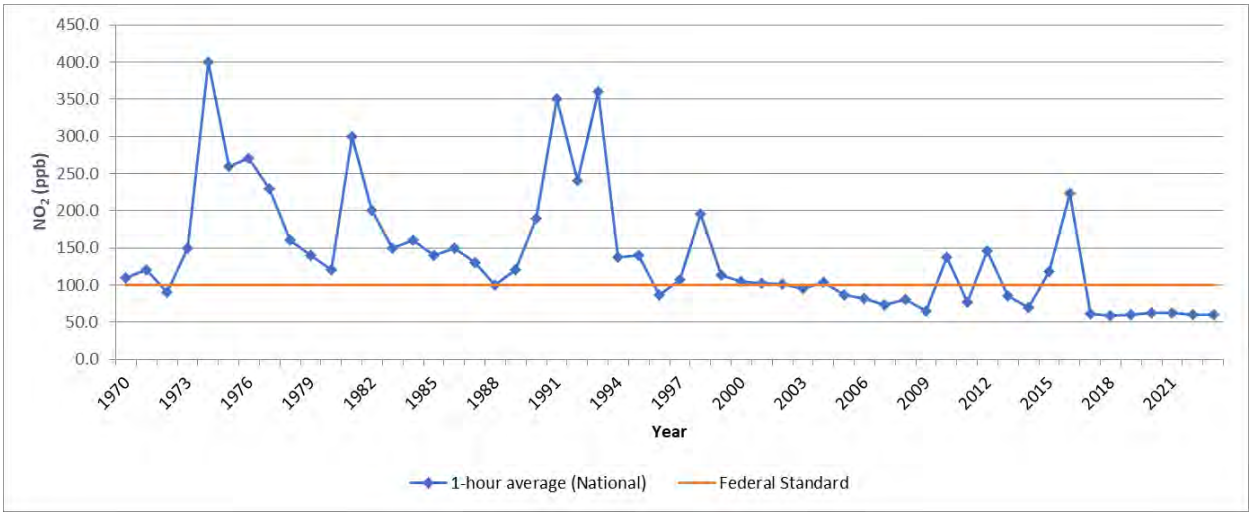
TABLE 2-10: MDAB ANNUAL AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON STATE STANDARD)[1]



Source: 2024 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2023)
[1] Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

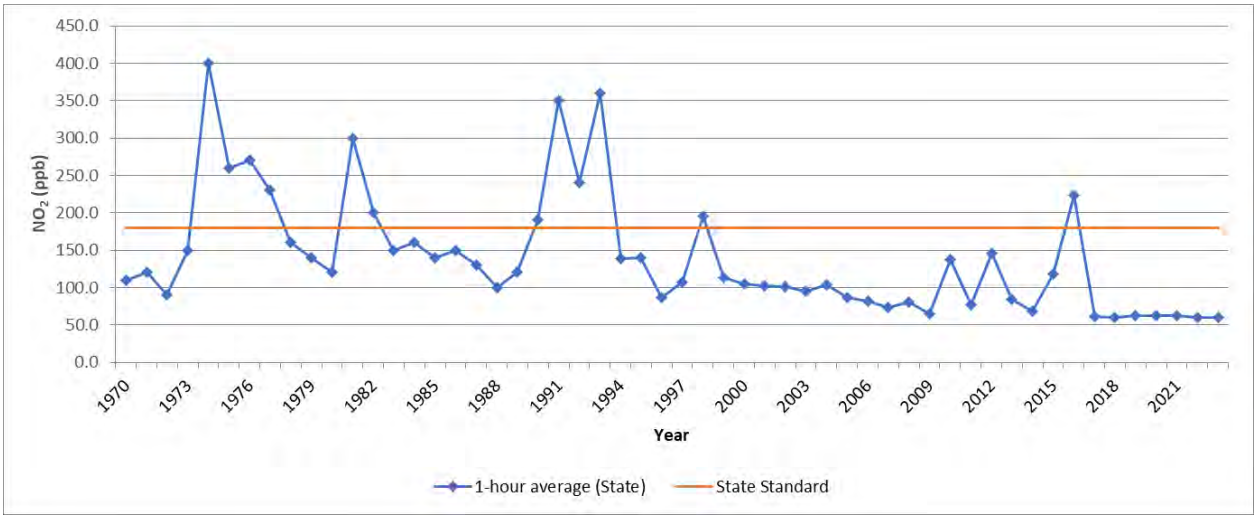
The most recent NO_2 data for the MDAB is shown in Tables 2-11 and 2-12 (20). Over the last 50 years, NO_2 values have decreased significantly; the peak 1-hour national and state averages for 2023 are approximately 45% lower than what they were in 1970. NO_2 is formed from NO_X emissions, which also contribute to O_3. As a result, the majority of the future emission control measures would be implemented as part of the overall O_3 control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO_X emissions.

TABLE 2-11: MDAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON FEDERAL STANDARD)



Source: 2024 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1970-2023)

TABLE 2-12: MDAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON STATE STANDARD)



Source: 2024 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1970-2023)

2.8.1 Toxic Air Contaminants (TAC) Trends

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary sources, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article (21) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O)[1]. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

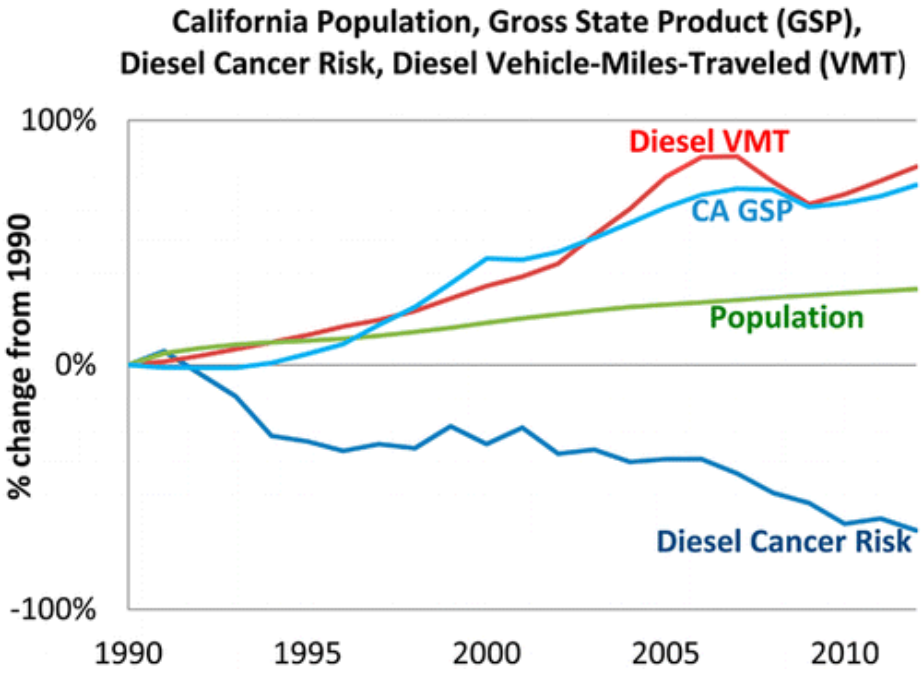
Mobile Source TACs

CARB introduced two programs aimed at reducing mobile emissions for light- and medium-duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon." The system would also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs.). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. Concentrations of 1,3-Butadiene also declined 85% from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations (21).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15 ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68% since 2000, even though the state's population increased 31% and the amount of diesel vehicles miles traveled increased 81%, as shown in Exhibit 2-A. With the implementation of these diesel-related control regulations, CARB expects a DPM decline of 71% for 2000-2020.

[1] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

EXHIBIT 2-A: DPM AND DIESEL VEHICLE MILES TREND



Source: 2020 CARB

Diesel Regulations

CARB and the Ports of Los Angeles and Long Beach (POLA and POLB) have adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, CARB Drayage Truck Regulation (22), CARB statewide On-road Truck and Bus Regulation (23), and the Ports of Los Angeles and Long Beach Clean Truck Program (CTP) require accelerated implementation of "clean trucks" into the statewide truck fleet (24). In other words, older more polluting trucks would be replaced with newer, cleaner trucks as a function of these regulatory requirements.

Moreover, the average statewide DPM emissions for Heavy-Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, would dramatically be reduced due to the aforementioned regulatory requirements. Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling.

3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the MDAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The MDAQMD has developed regional significance thresholds for regulated pollutants, shown below in Table 3-1. The MDAQMD's *CEQA and Federal Conformity Guidelines* indicate that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact (25).

TABLE 3-1: REGIONAL EMISSIONS SIGNIFICANCE THRESHOLDS

Pollutant	Threshold
CO	548 lbs./day
NO_X	137 lbs./day
VOC	137 lbs./day
SO_X	137 lbs./day
PM_{10}	82 lbs./day
$PM_{2.5}$	65 lbs./day

Lbs./day = Pounds Per Day

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CalEEMod

Land uses, such as the Project, affect air quality through construction-source and operational-source emissions. The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including MDAQMD, released CalEEMod 2022 in May 2022. CalEEMod

periodically releases updates; as such, the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (26). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1.

3.4 CONSTRUCTION EMISSIONS

3.4.1 Construction Activities

Construction activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction-related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

Grading Activities

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on consultation with the project team, the Project site would require a net fill of approximately 59,302 cubic yards of soil import.

Off-Site Utility and Infrastructure Improvements

In addition, to support the Project development, there will be paving for off-site improvements associated with roadway construction and utility installation, as well as installation of fire hydrants and street lighting. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints on the amount of daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals on Table 3-3. As such, no impacts beyond what has already been identified in this report are expected to occur.

3.4.2 Construction Duration

For purposes of analysis, Project construction will begin October 2026 and would last through September 2027. The construction schedule utilized in the analysis, shown in Table 3-2, represents a

"conservative" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[2] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (27).

TABLE 3-2: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40

3.4.3 Construction Equipment

Site-specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod defaults. Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-3 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Quantity	Hours
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8

[2] As shown in the CalEEMod User's Guide Version 2022, Appendix G "Table G-11. Statewide Average Annual Offroad Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Construction Activity	Equipment	Quantity	Hours
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

3.4.4 On-Road Trips

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and hauling trucks commuting to and from the site. The number of worker, vendor, and hauling trips per phase is presented below in Table 3-4. Worker, vendor, and hauling trips are based on CalEEMod defaults. It should be noted that, for vendor trips specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction, as shown in Table 3-4.

TABLE 3-4: CONSTRUCTION TRIP ASSUMPTIONS

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	4	0
Grading	25	13	172
Building Construction	210	56	0
Paving	15	10	0
Architectural Coating	42	0	0

3.4.5 Construction Emissions Summary

CalEEMod calculates maximum daily emissions for summer and winter periods. As such, the estimated maximum daily construction emissions without mitigation for both summer and winter periods are summarized in Table 3-5. Detailed unmitigated construction model outputs are presented in Appendix 3.1. Under the assumed scenario, emissions resulting from the Project construction would not exceed criteria pollutant thresholds established by the MDAQMD. As such, construction impacts would be considered less-than-significant and no mitigation is required.

TABLE 3-5: CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
2027	67.22	21.27	45.35	0.06	4.77	1.64
Winter						
2026	5.83	57.62	58.45	0.18	11.46	4.56
2027	2.02	12.88	24.82	0.04	3.61	1.14
Maximum Daily Emissions	67.22	57.62	58.45	0.18	11.46	4.56
MDAQMD Regional Thresholds	137	137	548	137	82	65
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions are expected from the following primary sources:

- Mobile Source Emissions;
- Area Source Emissions;
- Energy Source Emissions;
- Stationary Source Emissions; and
- On-site Cargo Handling Equipment Emissions.

3.5.1 Mobile Source Emissions

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis* were utilized in this analysis (28). Per the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study* the proposed Project expected to generate approximately 905 total trips per day which include 790 passenger car trips per day and 115 truck trips per day.

Passenger Vehicles

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses.

This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[3] & LDT2[4]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the fleet mix in Table 3-6 was utilized.

TABLE 3-6: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High-Cube Fulfillment Center (Non-Sort)	52.51%	4.52%	23.34%	16.84%	2.79%

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, MDV, and MCY vehicle types.

Trucks

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study*. The trip length function for the proposed industrial building use has been calculated

[3] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[4] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

to 30.47 miles for the high-cube fulfillment center warehouse (non-sort) with an assumption of 100% primary trips. This trip length assumption is higher than the CalEEMod defaults for trucks.

In order to be consistent with the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study*, trucks are broken down by truck type. The truck fleet mix is estimated by apportioning the trip rates for each truck type based on information provided in the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study.* Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[5] & LHDT2 [6])/2-axle, Medium-Heavy-Duty Trucks (MHD)/3-axle, and Heavy-Heavy-Duty Trucks (HHD)/4+-axle. To account for emissions generated by trucks, the fleet mix in Table 3-7 was utilized.

TABLE 3-7: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High-Cube Fulfillment Center (Non-Sort)	12.95%	3.57%	20.87%	62.61%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimate for travel on paved roads was calculated using CalEEMod.

On-Road Mobile Source Emissions Modeling Methodology

EMFAC 2021 and Off-Model Adjustment Factors

On-road mobile source emissions for the Project were estimated using the CARB's EMFAC 2021 model. EMFAC 2021 is the most recent version of EMFAC approved by the U.S. EPA for use in State Implementation Plans (SIPs) and federal transportation conformity determinations, and it remains the standard analytical platform for regional air quality planning in California.

On November 21, 2025, the U.S. EPA approved the use of EMFAC 2021 off-model adjustment factors. These adjustment factors remove the estimated emission benefits that were attributed to California's Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions, and Heavy Duty Omnibus regulations from EMFAC 2021. Because the preemption waivers for these regulations no longer have effect, these regulations are no longer enforceable. These adjustment factors are multipliers provided by CARB which adjust VOC, NO_X, PM_{10}, and $PM_{2.5}$ emission factors by year, region, and vehicle category to account for the removal of these regulations which are already accounted for in EMFAC 2021. Due to fleet turnover, the adjustment factors result in greater emission increases over the base EMFAC 2021 model outputs in later analysis years.

[5] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[6] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

Although these adjustment factors were approved by EPA primarily for SIP and conformity analysis purposes, they have been incorporated into this analysis in order to provide a conservative estimation of emissions in an evolving regulatory environment.

Application of Adjustment Factors in This Analysis

Because CalEEMod utilizes EMFAC 2021 emission factors to calculate on-road vehicle emissions, adjustment factors were applied to the mobile source emissions outputs for each operational land use based on the vehicle fleet mix. Additionally, adjustment factors were applied to on-road construction emissions, such as those resulting from haul and vendor trucks.

This approach ensures that the emissions estimates are consistent with CARB-approved and EPA-approved planning methodologies, reflect regulatory programs applicable to heavy-duty vehicles that may not be fully captured in the base EMFAC 2021 model, and provide a technically robust basis for evaluating regional and localized air quality impacts.

Conservatism and Applicability Under CEQA

The use of EMFAC 2021 off-model adjustment factors is not required for CEQA purposes. CEQA does not mandate the use of EPA-approved models or SIP-specific adjustment techniques. Instead, CEQA requires a reasonable, good-faith effort to disclose a project's potential environmental impacts using methodologies supported by substantial evidence.

The decision to apply EMFAC 2021 off-model adjustment factors was made to be conservative and precautionary, even though such factors are primarily intended for federal SIP development and transportation conformity analyses. By incorporating these EPA-approved adjustment factors, the analysis avoids understating emissions that could result if certain regulatory impacts were omitted from the base model outputs.

Consistency with SCAQMD CEQA Practice

SCAQMD CEQA guidance recognizes the use of CARB's EMFAC model for estimating on-road mobile source emissions and does not prescribe a single mandatory modeling configuration for CEQA analyses. The application of EMFAC 2021 with CARB-developed, EPA-approved off-model adjustment factors falls within accepted professional practice and reflects a reasonable exercise of technical judgment.

3.5.2 Area Source Emissions

Architectural Coatings

Over a period of time the buildings that are part of this Project would require maintenance and would therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.

Consumer Products

Consumer products include, but are not limited to, detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which, when released in the atmosphere, can react to form O_3 and other

photochemically reactive pollutants. The emissions associated with the use of consumer products were calculated based on defaults provided within CalEEMod.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that on October 9, 2021, Governor Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross HP (known as small off-road engines [SOREs]) by January 1, 2024, which is now in effect. However, for purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod, and do not incorporate the emissions reductions that would be realized from implementation of AB 1346.

3.5.3 Energy Source Emissions

Combustion Emissions Associated with Electricity and Natural Gas

Electricity and natural gas are used in almost every project. Criteria pollutant emissions are emitted through the generation of electricity. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity are excluded from the evaluation of significance. Natural gas and electricity usage associated with the Project was calculated by CalEEMod using default parameters.

3.5.4 Stationary Source Emissions

The proposed Project was conservatively assumed to include installation of one (1) 300-hp diesel-powered fire pump and one (1) 700-hp diesel-power emergency generator at the industrial building. The fire pump and emergency generator were estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary diesel-powered emergency fire pump and emergency generator were calculated using CalEEMod.

3.5.5 On-Site Cargo Handling Equipment Emissions

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, on-site modeled operational equipment includes up to two (2) 175 hp, natural gas-powered cargo handling equipment – port tractor operating 4 hours a day[7] for 365 days of the year.

3.5.6 Operational Emissions Summary

CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. The estimated

[7] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

operational-source emissions without mitigation are summarized in Table 3-8. Detailed operation model outputs for the Project are presented in Appendix 3.1. As shown on Table 3-8, the Project would not exceed the numerical thresholds of significance established by the MDAQMD for any emissions.

TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs./day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
Mobile	4.02	11.95	51.42	0.20	13.30	3.56
Area	15.03	0.18	21.73	0.00	0.04	0.03
Energy	0.14	2.55	2.14	0.02	0.19	0.19
Stationary	1.64	4.59	4.18	0.01	0.24	0.24
On-Site Equipment	0.23	0.75	32.89	0.00	0.06	0.05
Maximum Daily Emissions	21.07	20.03	112.37	0.22	13.83	4.08
MDAQMD Regional Thresholds	137	137	548	137	82	65
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Winter						
Mobile	3.70	12.73	38.95	0.18	13.30	3.56
Area	11.46	0.00	0.00	0.00	0.00	0.00
Energy	0.14	2.55	2.14	0.02	0.19	0.19
Stationary	1.64	4.59	4.18	0.01	0.24	0.24
On-Site Equipment	0.23	0.75	32.89	0.00	0.06	0.05
Maximum Daily Emissions	17.17	20.62	78.16	0.21	13.80	4.05
MDAQMD Regional Thresholds	137	137	548	137	82	65
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

3.6 CO "HOT SPOT" ANALYSIS

The MDAQMD has not established its own guidelines for CO hotspot analysis. Since the MDAQMD guidelines are based on SCAQMD methodology, it is appropriate to apply the SCAQMD criteria when analyzing CO hotspots within the MDAQMD. A CO hotspot is defined as a localized concentration of CO exceeding the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time the most recent CEQA Air Quality Handbook (1993) was published by SCAQMD, the air basin was designated as non-attainment, requiring projects to perform hotspot analyses to ensure they did not worsen the existing conditions. Over the last two decades, background CO concentrations have been significantly reduced due to regulatory controls on tailpipe emissions, which have culminated in the air basin achieving attainment status for CO.

The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

In 2003, the SCAQMD as part of its AQMP development process, prepared modeling to determine the potential for CO hotspots at the four busiest intersections in the air basin. As summarized in the 2003 AQMP, even at one of the busiest intersections at that time, only 0.7 ppm of CO is attributable to vehicular traffic and the remaining 7.7 ppm were due to ambient background conditions. As shown in Table 2-5 in this report, the background 1-hour and 8-hour concentrations are well below the applicable AAQS. The 2003 AQMP's findings underscore that CO hotspots are highly unlikely due to the reduced background concentrations and the effectiveness of California's air quality management strategies. The substantial reduction in CO levels from the vehicle fleet and the state's attainment status for CO further diminish the need for detailed microscale hotspot analyses, reinforcing that existing monitoring and regulatory frameworks adequately address potential air quality concerns.

As such, Project-related traffic at any intersections within the Project area would not cause or contribute to a CO hotspot since the background concentrations are low and any contribution from Project traffic would be negligible.

3.7 AQMP

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with the indicators discussed below.

3.7.1 Consistency Criterion No. 1

Local land use plans and/or population projections

The proposed Project is located within the City of Hesperia General Plan and has an existing land use designation for "General Commercial" (C2). The C2 land use designation is intended for goods and services of general nature, as well as professional offices that meet both short- and long-term needs of the City's population (29). The Project uses are allowed under the site's existing C2 General Plan land use designation and does not propose or require a General Plan Amendment affecting the Project site or any off-site City of Hesperia properties. The proposed Project site would have an FAR of 0.376, which is in conformance with the maximum allowable FAR of 1.0 under the C2 designation. The Project Applicant proposes land uses that are consistent with development anticipated under the site's existing General Plan designation. The Project would therefore conform to local land use plans.

3.7.2 Consistency Criterion No. 2

All MDAQMD Rules and Regulations

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), 403 (Fugitive Dust), and 1113 (Architectural Coatings). As previously stated in Section ES.2 of this AQIA, the Project would implement MDAQMD Rule 403 and MDAQMD Rule 1113.

3.7.3 Consistency Criterion No. 3

Demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards

As substantiated herein, Project construction and operational-source emissions would not exceed applicable MDAQMD regional thresholds. As such, the Project would not have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality for on-going project operations.

AQMP Consistency Conclusion

The Project would not result in or cause NAAQS or CAAQS violations. The Project's proposed land use designation for the subject site is consistent with the land use designation discussed in the General Plan. Furthermore, the Project would not exceed the applicable regional thresholds and would therefore be considered to have a less than significant impact. The Project is therefore considered to be consistent with the AQMP.

3.8 Potential Impacts to Sensitive Receptors

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered a sensitive receptors.

As per the MDAQMD's *Guidelines*, the following project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors (25):

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

The Project includes development of a 499,714 square high-cube fulfillment center warehouse building. As such, the potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Receptors in the Project study area are described below and shown in Exhibit 3-A. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site. Distance is measured in a straight line from the project boundary to each receptor location.

R1: Location R1 represents the existing sensitive residence at 13030 Avenal Street, approximately 71 feet north of the Project site. Receptor R1 is placed at the private outdoor living areas (backyards) facing the Project site.

R2: Location R2 represents the existing sensitive residence at 13164 Avenal Road, approximately 76 feet north of the Project site. Receptor R2 is placed at the private outdoor living areas (backyards) facing the Project site.

R3: Location R3 represents the existing sensitive residence at 10445 Avenal Street, approximately 1,263 feet east of the Project site. Receptor R3 is placed at the private outdoor living areas (backyards) facing the Project site.

R4: Location R4 represents the existing sensitive residence at 10122 Mt. Whitney Way, approximately 1,071 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R4 is placed at the residential building façade.

R5: Location R5 represents the existing sensitive residence at 10376 Wellington Road, approximately 227 feet north of the Project site Receptor R5 is placed at the private outdoor living areas (backyards) facing the Project site.

R6: Location R6 represents MGA Entertainment, Inc. at 10200 Amargosa Road, approximately 201 feet south of the Project site.

Based on Exhibit 3-A, the nearest sensitive receptor is a residence at 13030 Avenal Street, approximately 71 feet north of the Project site.

The Project would have a potentially significant health risk impact if it results in a maximum incremental cancer risk from emission of Toxic Air Contaminants (TACs) of ≥ 10 in one million and/or a chronic & acute hazard index that is ≥1.0. In the case of the Project, the TAC of concern is diesel particulate matter (DPM) that could be generated by Project construction activities, and on-site and off-site DPM that would result from on-going Project operations. For purposes of this evaluation, a Health Risk Assessment (HRA) has been prepared by Urban Crossroads, Inc. under a separate cover. The results of the *Amargosa and Palmetto High-Cube Warehouse Mobile Source Health Risk Assessment* (Urban Crossroads, Inc.) indicate that the Project would not result in any potentially significant health risk impacts from exposure to DPM emissions (30). Therefore, impacts to sensitive receptors are expected to be less than significant.

EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS



3.9 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. With respect to the operation of the gas station, gasoline dispensing activities may also generate odors associated with gasoline fumes. The gas pumps and underground storage tanks would include requirements based on MDAQMD Rule 461 vapor recovery systems that would control VOC vapor releases during refueling and would minimize driver and employee exposure to gasoline odors and fumes. Thus, gasoline odors are not expected to adversely affect adjacent land uses. While restaurants may result in some odors from the cooking process, these odors are not typically considered objectionable. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The Project would also be required to comply with MDAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the Project would be less than significant and no mitigation is required (31).

3.10 CUMULATIVE IMPACTS

The MDAQMD has not established its own guidelines for cumulative impacts. Since the MDAQMD guidelines are based on SCAQMD methodology, it is appropriate to apply the SCAQMD criteria when analyzing cumulative impacts within the MDAQMD. The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects.

The SCAQMD published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (32). In this report the SCAQMD clearly states (Page D-3):

"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Consistent with the above SCAQMD guidance, individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Conversely, individual project-related construction and operational emissions that exceed MDAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction-Source Emission Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions would not result in exceedances of MDAQMD thresholds. Therefore, Project construction-source emissions would be considered less than significant on a Project-specific and cumulative basis.

Operational-Source Emission Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project operational-source air pollutant emissions would not result in exceedances of MDAQMD thresholds. Therefore, Project operational-source emissions would be considered less than significant on a Project-specific and cumulative basis.

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5 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

Haseeb Qureshi
Principal
URBAN CROSSROADS, INC.
1133 Camelback #8329
Newport Beach, CA 92658
hqureshi@urbanxroads.com

Education

Master of Science in Environmental Studies
California State University, Fullerton • May 2010
Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

Professional Affiliations

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

Professional Certifications

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

Appendix C - Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Table of Ambient Air Quality Standards

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	9.0 µg/m^3	15.0 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		53 ppb (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On February 7, 2024, the national annual PM2.5 primary standard was lowered from 12.0 µg/m3 to 9.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15.0 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$)as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment transitional, or unclassified for each pollutant, as shown below:

Designation	Abbreviation
Attainment	A
Nonattainment	N
Nonattainment Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

Table 1 California Ambient Air Quality Standards Area Designations for Ozone[1]

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	
Alpine County	U
Inyo County	N
Mono County	N
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	NA-T
MOJAVE DESERT AIR BASIN	N
MOUNTAIN COUNTIES AIR BASIN	
Amador County	NA-T
Calaveras County	NA-T
El Dorado County (portion)	N
Mariposa County	N
Nevada County	N
Placer County (portion)	NA-T
Plumas County	U
Sierra County	U
Tuolumne County	NA-T
NORTH CENTRAL COAST AIR BASIN	A
NORTH COAST AIR BASIN	A
NORTHEAST PLATEAU AIR BASIN	A
SACRAMENTO VALLEY AIR BASIN	
Butte County	NA-T
Colusa and Glenn Counties	A
Shasta County	NA-T
Sutter/Yuba Counties	
Sutter Buttes	NA-T
Remainder of Sutter County	NA-T
Yuba County	NA-T
Yolo/Solano Counties	NA-T
Remainder of Air Basin	N
SALTON SEA AIR BASIN	N
SAN DIEGO AIR BASIN	N
SAN FRANCISCO BAY AREA AIR BASIN	NA-T
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN	
San Luis Obispo County	N
Santa Barbara County	NA-T
Ventura County	N
SOUTH COAST AIR BASIN	N

[1] AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

Figure 1


2024
Area Designations for State
Ambient Air Quality Standards
OZONE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Sutter Buttes
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Placer
LAKE TAHOE
Sutter
El Dorado
Yolo
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
Imperial
San Diego
SAN DIEGO
Unclassified
Attainment
Nonattainment-Transitional
Nonattainment
Air Basin
County
Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 2
California Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM_{10})

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	N
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	N
MOJAVE DESERT AIR BASIN	N
MOUNTAIN COUNTIES AIR BASIN	
Amador County	U
Calaveras County	N
El Dorado County (portion)	N
Mariposa County	
- Yosemite National Park	N
- Remainder of County	U
Nevada County	U
Placer County (portion)	N
Plumas County	U
Sierra County	U
Tuolumne County	U
NORTH CENTRAL COAST AIR BASIN	N
NORTH COAST AIR BASIN	
Del Norte, Mendocino, Sonoma (portion) and Trinity Counties	A
Remainder of Air Basin	N
NORTHEAST PLATEAU AIR BASIN	
Siskiyou County	A
Remainder of Air Basin	U
SACRAMENTO VALLEY AIR BASIN	
Shasta County	A
Remainder of Air Basin	N
SALTON SEA AIR BASIN	N
SAN DIEGO AIR BASIN	N
SAN FRANCISCO BAY AREA AIR BASIN	N
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN	N
SOUTH COAST AIR BASIN	N

Figure 2


2024
Area Designations for State
Ambient Air Quality Standards
PM10
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Placer
LAKE TAHOE
Sutter
El Dorado
Yolo
Sonoma
Napa
Sac
Amador
Alpine
Yosemite NP
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Orange
Riverside
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 3
California Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	A
MOUNTAIN COUNTIES AIR BASIN	
Plumas County	
- Portola Valley[2]	N
- Remainder Plumas County	U
Remainder of Air Basin	U
NORTH CENTRAL COAST AIR BASIN	A
NORTH COAST AIR BASIN	A
NORTHEAST PLATEAU AIR BASIN	A
SACRAMENTO VALLEY AIR BASIN	
Butte County	A
Colusa County	A
Glenn County	A
Placer County (portion)	A
Sacramento County	A
Shasta County	A
Sutter and Yuba Counties	N
Remainder of Air Basin	U
SALTON SEA AIR BASIN	
Imperial County	
- City of Calexico[3]	N
Remainder of Air Basin	A
SAN DIEGO AIR BASIN	N
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	N

[2] California Code of Regulations, title 17, section 60200(c)
[3] California Code of Regulations, title 17, section 60200(a)

Figure 3

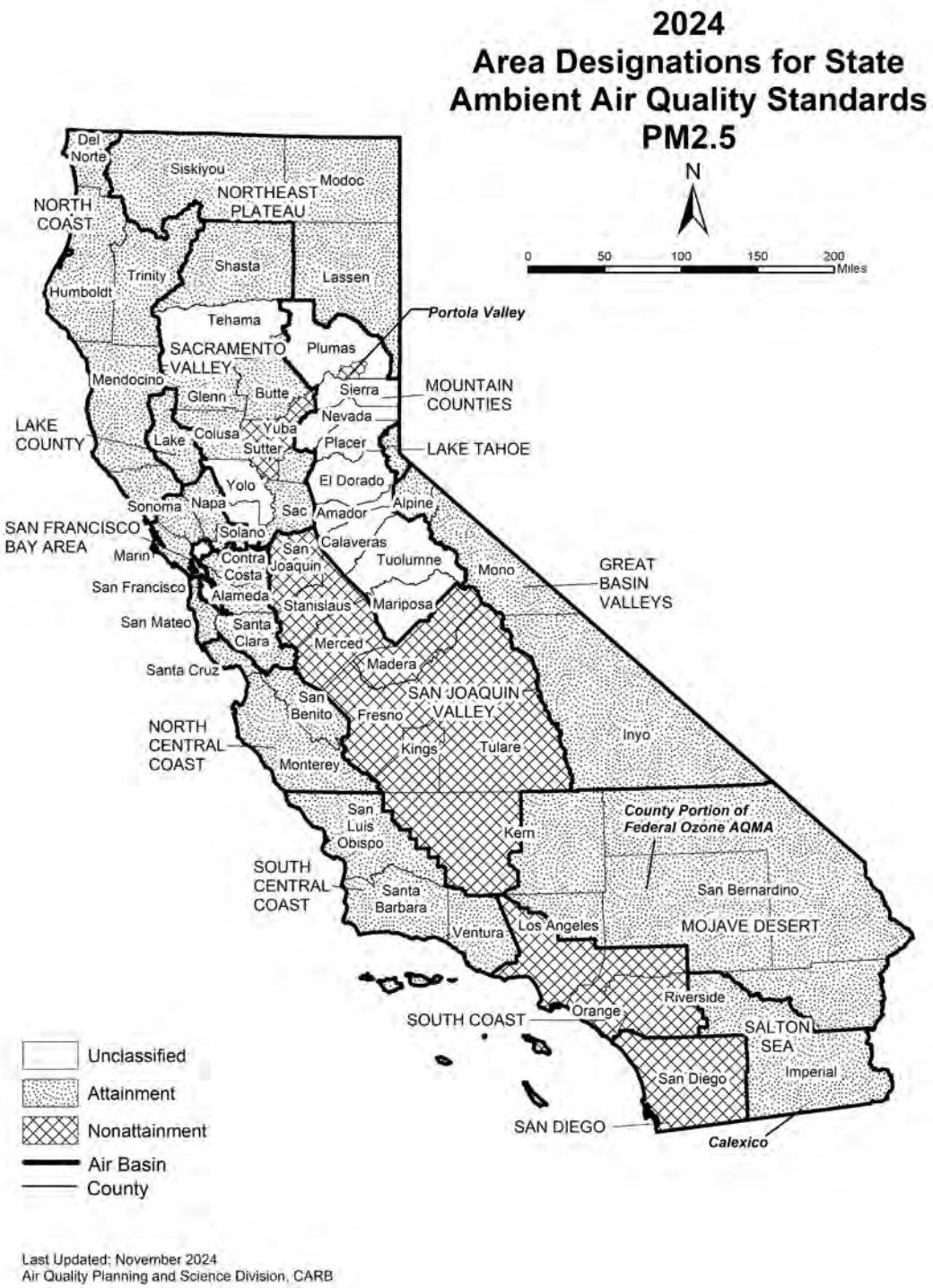

2024
Area Designations for State
Ambient Air Quality Standards
PM2.5
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Portola Valley
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
County Portion of Federal Ozone AQMA
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Calexico
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: November 2024
Air Quality Planning and Science Division, CARB

Table 4
California Ambient Air Quality Standards Area Designations for Carbon Monoxide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	
Alpine County	U
Inyo County	A
Mono County	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	
Kern County (portion)	U
Los Angeles County (portion)	A
Riverside County (portion)	U
San Bernardino County (portion)	A
MOUNTAIN COUNTIES AIR BASIN	
Amador County	U
Calaveras County	U
El Dorado County (portion)	U
Mariposa County	U
Nevada County	U
Placer County (portion)	U
Plumas County	A
Sierra County	U
Tuolumne County	A
NORTH CENTRAL COAST AIR BASIN	
Monterey County	A
San Benito County	U
Santa Cruz County	U
NORTH COAST AIR BASIN	
Del Norte County	U
Humboldt County	A
Mendocino County	A
Sonoma County (portion)	U
Trinity County	U

Area	Designations
NORTHEAST PLATEAU AIR BASIN	U
SACRAMENTO VALLEY AIR BASIN	
Butte County	A
Colusa County	U
Glenn County	U
Placer County (portion)	A
Sacramento County	A
Shasta County	U
Solano County (portion)	A
Sutter County	A
Tehama County	U
Yolo County	A
Yuba County	U
SALTON SEA AIR BASIN	A
SAN DIEGO AIR BASIN	A
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	
Fresno County	A
Kern County (portion)	A
Kings County	U
Madera County	U
Merced County	U
San Joaquin County	A
Stanislaus County	A
Tulare County	A
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	A

* The area designated for carbon monoxide is a county or portion of a county

Figure 4

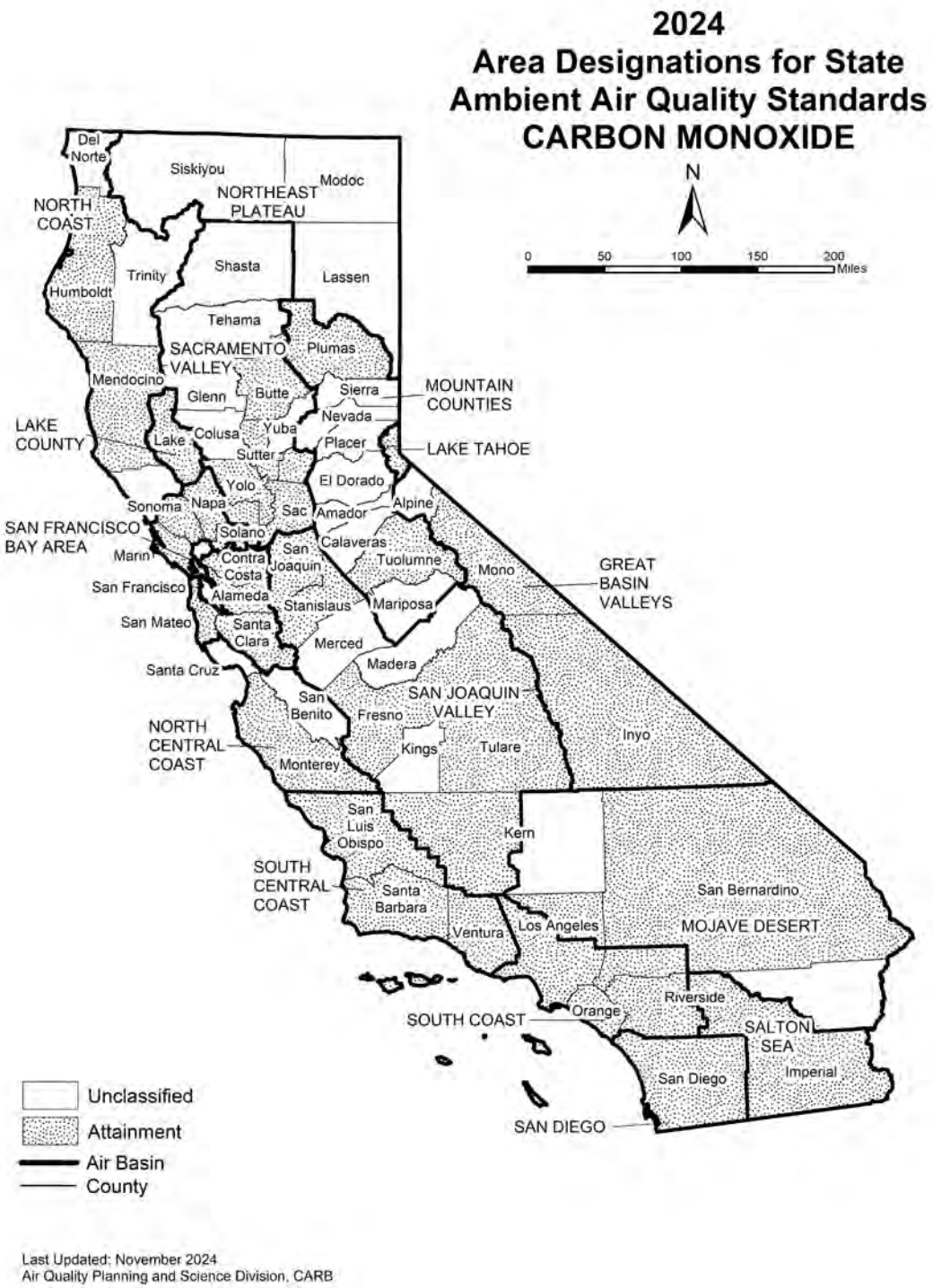

2024
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Placer
LAKE TAHOE
Sutter
El Dorado
Yolo
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
SAN JOAQUIN VALLEY
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: November 2024
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Table 5
California Ambient Air Quality Standards Area Designations for Nitrogen Dioxide

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	A
MOUNTAIN COUNTIES AIR BASIN	A
NORTH CENTRAL COAST AIR BASIN	A
NORTH COAST AIR BASIN	A
NORTHEAST PLATEAU AIR BASIN	A
SACRAMENTO VALLEY AIR BASIN	A
SALTON SEA AIR BASIN	A
SAN DIEGO AIR BASIN	A
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	A
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	
CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties	A
Remainder of Air Basin	A

Figure 5


2024
Area Designations for State
Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Placer
LAKE TAHOE
Sutter
El Dorado
Yolo
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
CA 60 (Portion)
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Calexico
Attainment
Nonattainment
Air Basin
County
Last Updated: November 2024
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Table 6
California Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	A
MOUNTAIN COUNTIES AIR BASIN	A
NORTH CENTRAL COAST AIR BASIN	A
NORTH COAST AIR BASIN	A
NORTHEAST PLATEAU AIR BASIN	A
SACRAMENTO VALLEY AIR BASIN	A
SALTON SEA AIR BASIN	A
SAN DIEGO AIR BASIN	A
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	A
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	A

* The area designated for sulfur dioxide is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 6


2024
Area Designations for State
Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: November 2024
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Table 7
California Ambient Air Quality Standards Area Designations for Sulfates

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	A
MOUNTAIN COUNTIES AIR BASIN	A
NORTH CENTRAL COAST AIR BASIN	A
NORTH COAST AIR BASIN	A
NORTHEAST PLATEAU AIR BASIN	A
SACRAMENTO VALLEY AIR BASIN	A
SALTON SEA AIR BASIN	A
SAN DIEGO AIR BASIN	A
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	A
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	A

Figure 7


2024
Area Designations for State
Ambient Air Quality Standards
SULFATES
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Placer
LAKE TAHOE
Sutter
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: November 2024
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Table 8
California Ambient Air Quality Standards Area Designations for Lead (particulate)*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	A
MOJAVE DESERT AIR BASIN	A
MOUNTAIN COUNTIES AIR BASIN	A
NORTH CENTRAL COAST AIR BASIN	A
NORTH COAST AIR BASIN	A
NORTHEAST PLATEAU AIR BASIN	A
SACRAMENTO VALLEY AIR BASIN	A
SALTON SEA AIR BASIN	A
SAN DIEGO AIR BASIN	A
SAN FRANCISCO BAY AREA AIR BASIN	A
SAN JOAQUIN VALLEY AIR BASIN	A
SOUTH CENTRAL COAST AIR BASIN	A
SOUTH COAST AIR BASIN	A

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 8


2024
Area Designations for State
Ambient Air Quality Standards
LEAD
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Placer
LAKE TAHOE
Sutter
El Dorado
Yolo
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: November 2024
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Table 9
California Ambient Air Quality Standards Area Designations for Hydrogen Sulfide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	
Alpine County	U
Inyo County	A
Mono County	A
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	U
MOJAVE DESERT AIR BASIN	
Kern County (portion)	U
Los Angeles County (portion)	U
Riverside County (portion)	U
San Bernardino County (portion)	
- Searles Valley Planning Area[4]	N
- Remainder of County	U
MOUNTAIN COUNTIES AIR BASIN	
Amador County	
- City of Sutter Creek	N
- Remainder of County	U
Calaveras County	U
El Dorado County (portion)	U
Mariposa County	U
Nevada County	U
Placer County (portion)	U
Plumas County	U
Sierra County	U
Tuolumne County	U

Area	Designations
NORTH CENTRAL COAST AIR BASIN	U
NORTH COAST AIR BASIN	
Del Norte County	U
Humboldt County	A
Mendocino County	U
Sonoma County (portion)	
- Geyser Geothermal Area[5]	A
- Remainder of County	U
Trinity County	U
NORTHEAST PLATEAU AIR BASIN	U
SACRAMENTO VALLEY AIR BASIN	U
SALTON SEA AIR BASIN	
Riverside County (portion)	N
Imperial County	U
SAN DIEGO AIR BASIN	U
SAN FRANCISCO BAY AREA AIR BASIN	U
SAN JOAQUIN VALLEY AIR BASIN	U
SOUTH CENTRAL COAST AIR BASIN	
San Luis Obispo County	A
Santa Barbara County	A
Ventura County	U
SOUTH COAST AIR BASIN	U

* The area designated for hydrogen sulfide is a county or portion of a county

[4] 52 Federal Register 29384 (August 7, 1987)

[5] California Code of Regulations, title 17, section 60200(d)

Figure 9


2024
Area Designations for State
Ambient Air Quality Standards
HYDROGEN SULFIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Geyser Geothermal
Yolo
El Dorado
City of Sutter Creek
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Searles Valley
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Coachella Valley
Riverside
Orange
SOUTH COAST
SALTON SEA
Imperial
San Diego
SAN DIEGO
Unclassified
Attainment
Nonattainment
Air Basin
County
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Table 10
California Ambient Air Quality Standards Area Designations for Visibility Reducing Particles

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U
LAKE COUNTY AIR BASIN	A
LAKE TAHOE AIR BASIN	U
MOJAVE DESERT AIR BASIN	U
MOUNTAIN COUNTIES AIR BASIN	U
NORTH CENTRAL COAST AIR BASIN	U
NORTH COAST AIR BASIN	U
NORTHEAST PLATEAU AIR BASIN	U
SACRAMENTO VALLEY AIR BASIN	U
SALTON SEA AIR BASIN	U
SAN DIEGO AIR BASIN	U
SAN FRANCISCO BAY AREA AIR BASIN	U
SAN JOAQUIN VALLEY AIR BASIN	U
SOUTH CENTRAL COAST AIR BASIN	U
SOUTH COAST AIR BASIN	U

Figure 10


2024
Area Designations for State
Ambient Air Quality Standards
VISIBILITY REDUCING PARTICLES
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Placer
LAKE TAHOE
Sutter
El Dorado
Yolo
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
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Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. These maps reflect all current national standards. For example, the map for Fine Suspended Particulate Matter ($PM_{2.5}$) reflects both the annual and the 24-hour standard. Additional information about the federal area designations is available on the U.S. EPA website: *Nonattainment Areas for Criteria Pollutants (Green Book)*

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website: *Criteria Air Pollutants*

On February 7, 2024, the U.S. EPA established a new national annual primary $PM_{2.5}$ standard of 9.0 µg/m^3. Area designations for this revised standard will be finalized in February 2026. Until that time, the current designation map will reflect the most previous 2012 annual average standard of 12.0 µg/m^3 as well as the 24-hour standard of 35 µg/m^3, last revised in 2006.

Designation Categories

Suspended Particulate Matter (PM_{10}). The U.S. EPA uses three categories to designate areas with respect to PM_{10}:

- Attainment (A)
- Nonattainment (N)
- Unclassifiable (U)

Ozone, Fine Suspended Particulate Matter ($PM_{2.5}$), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), and Lead. The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment (N)
- Unclassifiable/Attainment (U/A)

Sulfur Dioxide (SO_2). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment (N),
- Unclassifiable (U), and
- Unclassifiable/Attainment (U/A).

Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency,

the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at: *Title 40 SECTION 81.305*.

Table 11
National Ambient Air Quality Standards Area Designations for 8-Hour Ozone*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	
Amador County	N
Calaveras County	N
El Dorado County (portion)[6]	N
Mariposa County	N
Nevada County	
- Western Nevada County	N
- Remainder of County	U/A
Placer County (portion)[6]	N
Plumas County	U/A
Sierra County	U/A
Tuolumne County	N
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	
Butte County	N
Colusa County	U/A
Glenn County	U/A
Sacramento Metro Area[6]	N
Shasta County	U/A
Sutter County	
- Sutter Buttes	N
- Southern portion of Sutter County[6]	N
- Remainder of Sutter County	U/A
Tehama County	
- Tuscan Buttes	N
- Remainder of Tehama County	U/A

Area	Designations
SACRAMENTO VALLEY AIR BASIN (cont.)	
Yolo County[6]	N
Yuba County	U/A
SAN DIEGO COUNTY	N
SAN FRANCISCO BAY AREA AIR BASIN	N
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN[7]	
San Luis Obispo County	
- Eastern San Luis Obispo County	N
- Remainder of County	U/A
Santa Barbara County	U/A
Ventura County	
- Area Excluding Anacapa and San Nicolas Islands	N
- Channel Islands[7]	U/A
SOUTH COAST AIR BASIN[7]	N
SOUTHEAST DESERT AIR BASIN	
Kern County (portion)	N
- Indian Wells Valley	U/A
Imperial County	N
Los Angeles County (portion)	N
Riverside County (portion)	
- Coachella Valley	N
- Non-AQMA portion	U/A
San Bernardino County	
- Western portion (AQMA)	N
- Eastern portion (non-AQMA)	U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and Table reflect the 2015 8-hour ozone standard of 0.070 ppm.

[6] For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

[7] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
South Coast Air Basin:
Los Angeles County includes San Clemente and Santa Catalina Islands.

Figure 11


Area Designations for National Ambient Air Quality Standards
8-HOUR OZONE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Sutter Buttes
Tuscan Buttes
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
Antelope Valley and Western Mojave Desert
NORTH CENTRAL COAST
Monterey
Kings
Tulare
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
SOUTH COAST
Orange
SALTON SEA
Coachella Valley
San Diego
Imperial
SAN DIEGO
Unclassified/Attainment
Nonattainment
Air Basin
County
Last Updated: November 2023
Map reflects the 2015 8-hour ozone standard of 0.070 ppm
Air Quality Planning and Science Division, CARB

Table 12 National Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM_{10})*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	
Alpine County	U
Inyo County	
- Owens Valley Planning Area	N
- Coso Junction	A
- Remainder of County	U
Mono County	
- Mammoth Lake Planning Area	A
- Mono Lake Basin	N
- Remainder of County	U
LAKE COUNTY AIR BASIN	U
LAKE TAHOE AIR BASIN	U
MOUNTAIN COUNTIES AIR BASIN	U
NORTH CENTRAL COAST AIR BASIN	U
NORTH COAST AIR BASIN	U
NORTHEAST PLATEAU AIR BASIN	U
SACRAMENTO VALLEY AIR BASIN	
Sacramento County	A
Remainder of Air Basin	U
SAN DIEGO COUNTY	U

Area	Designations
SAN FRANCISCO BAY AREA AIR BASIN	U
SAN JOAQUIN VALLEY AIR BASIN	A
SOUTH CENTRAL COAST AIR BASIN	U
SOUTH COAST AIR BASIN	A
SOUTHEAST DESERT AIR BASIN	
Eastern Kern County	
- Indian Wells Valley	A
- Portion within San Joaquin Valley Planning Area	N
- Remainder of County	U
Imperial County	
- Imperial Valley Planning Area	A
- Remainder of County	U
Los Angeles County (portion)	U
Riverside County (portion)	
- Coachella Valley	N
- Non-AQMA portion	U
San Bernardino County	
- Trona	N
- Remainder of County	N

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 12


Area Designations for National Ambient Air Quality Standards PM10
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Trinity
Lassen
Humboldt
Tehema
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Alpine
Sacramento County
Sonoma
Napa
Sac
Amador
SAN FRANCISCO BAY AREA
Marin
Solano
Calaveras
Mono
Mono Basin
Contra Costa
San Joaquin
Tuolumne
Mammoth Lake
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Inyo
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Owens Valley
Coso Junction
Trona
NORTH CENTRAL COAST
Monterey
Kings
Tulare
San Luis Obispo
Kern
Indian Wells Valley
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
Riverside
Coachella Valley
Orange
SOUTH COAST
Imperial
San Diego
SAN DIEGO COUNTY
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: November 2023
Air Quality Planning and Science Division

Table 13
National Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	
Plumas County	
- Portola Valley Portion of Plumas County	N
- Remainder of Plumas County	U/A
Remainder of Air Basin	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	
Sacramento Metro Area[8]	N
Remainder of Air Basin	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN[9]	N
SAN JOAQUIN VALLEY AIR BASIN	N
SOUTH CENTRAL COAST AIR BASIN	U/A
SOUTH COAST AIR BASIN[10]	N
SOUTHEAST DESERT AIR BASIN	
Imperial County (portion)[11]	N
Remainder of Air Basin	U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map reflects the 2006 24-hour $PM_{2.5}$ standard as well as the 1997 and 2012 $PM_{2.5}$ annual standards.

[8] For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[9] Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[10] Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

[11] That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

Figure 13


Area Designations for National Ambient Air Quality Standards PM2.5
N
0 50 100 150 200 Miles
NORTH COAST
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
Humboldt
Trinity
Shasta
Lassen
Tehama
SACRAMENTO VALLEY
Plumas
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Mendocino
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
El Dorado
Yolo
Alpine
Sonoma
Napa
Sacramento
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
GREAT BASIN VALLEYS
Marin
Tuolumne
Contra Costa
San Joaquin
Mono
Alameda
Stanislaus
Mariposa
San Mateo
Merced
Madera
Santa Clara
Santa Cruz
Fresno
NORTH CENTRAL COAST
San Benito
Inyo
Tulare
Monterey
Kings
SAN JOAQUIN VALLEY
San Luis Obispo
Kern
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
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Table 14
National Ambient Air Quality Standards Area Designations for Carbon Monoxide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN	U/A
SAN JOAQUIN VALLEY AIR BASIN	U/A
SOUTH CENTRAL COAST AIR BASIN	U/A
SOUTH COAST AIR BASIN	U/A
SOUTHEAST DESERT AIR BASIN	U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 14


Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Alpine
Napa
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
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Air Quality Planning and Science Division

Table 15
National Ambient Air Quality Standards Area Designations for Nitrogen Dioxide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN	U/A
SAN JOAQUIN VALLEY AIR BASIN	U/A
SOUTH CENTRAL COAST AIR BASIN	U/A
SOUTH COAST AIR BASIN	U/A
SOUTHEAST DESERT AIR BASIN	U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 15


Area Designations for National Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
Colusa
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
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Amador
SAN FRANCISCO BAY AREA
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Marin
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
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Table 16
National Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN	U/A
SAN JOAQUIN VALLEY AIR BASIN	U/A
SOUTH CENTRAL COAST AIR BASIN[12]	U/A
SOUTH COAST AIR BASIN	U/A
SOUTHEAST DESERT AIR BASIN	U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2010 1-hour SO_2 standard of 75 ppb.

[12] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

Figure 16

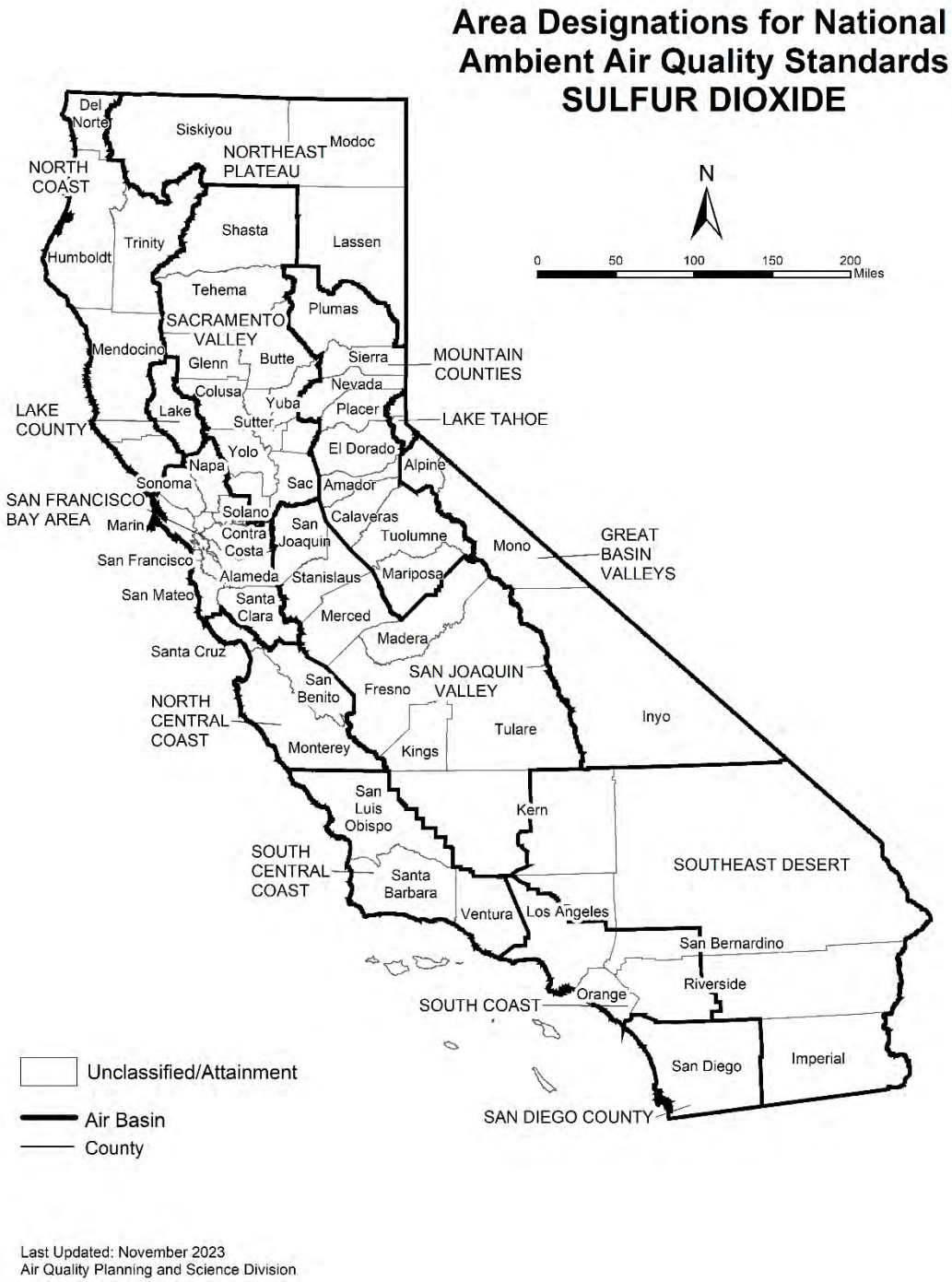
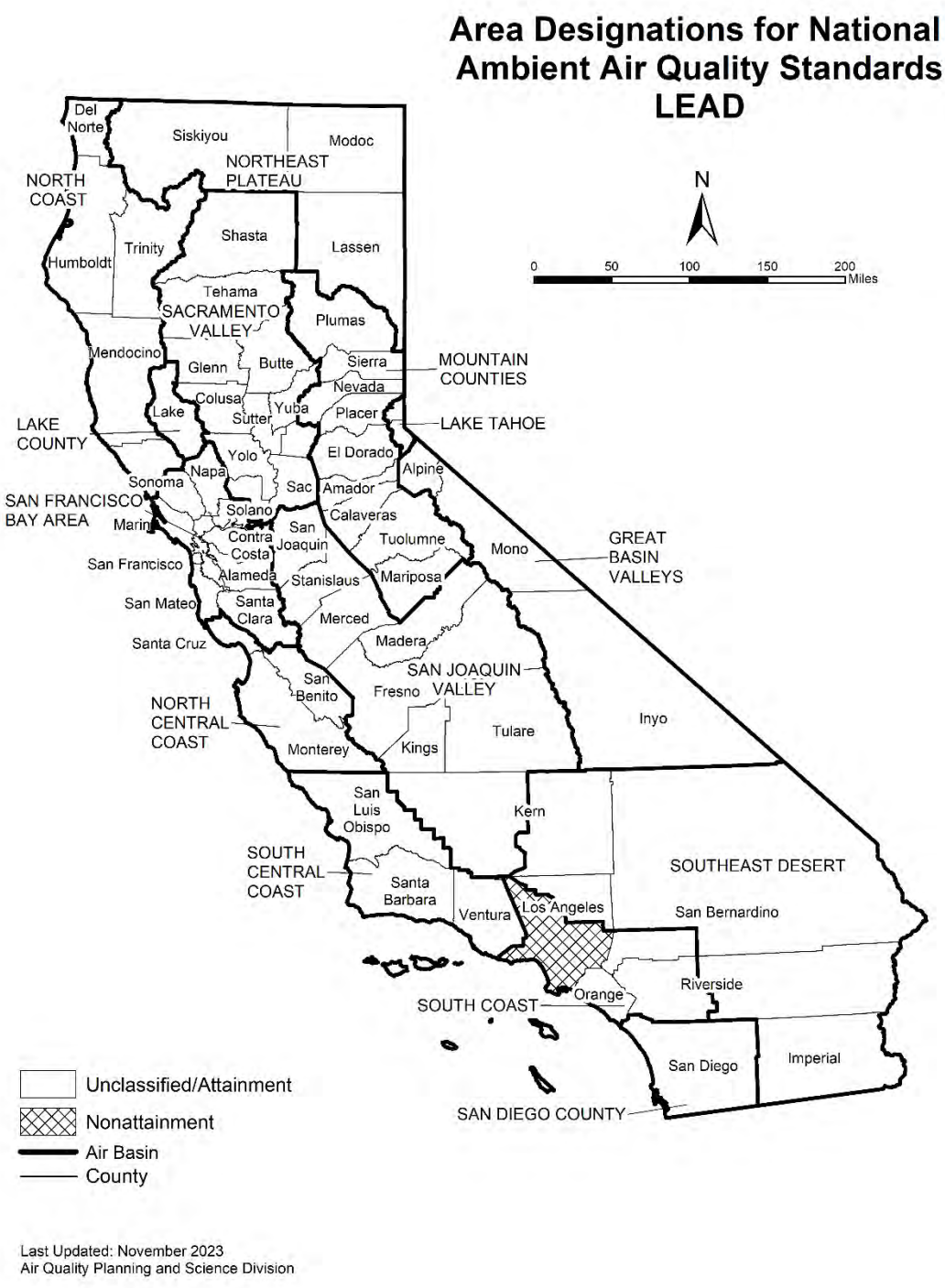

Area Designations for National Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Colusa
Nevada
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Last Updated: November 2023
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Table 17
National Ambient Air Quality Standards Area Designations for Lead (particulate)

Area	Designations
GREAT BASIN VALLEYS AIR BASIN	U/A
LAKE COUNTY AIR BASIN	U/A
LAKE TAHOE AIR BASIN	U/A
MOUNTAIN COUNTIES AIR BASIN	U/A
NORTH CENTRAL COAST AIR BASIN	U/A
NORTH COAST AIR BASIN	U/A
NORTHEAST PLATEAU AIR BASIN	U/A
SACRAMENTO VALLEY AIR BASIN	U/A
SAN DIEGO COUNTY	U/A
SAN FRANCISCO BAY AREA AIR BASIN	U/A
SAN JOAQUIN VALLEY AIR BASIN	U/A
SOUTH CENTRAL COAST AIR BASIN	U/A
SOUTH COAST AIR BASIN	
Los Angeles County (portion)[13]	N
Remainder of Air Basin	U/A
SOUTHEAST DESERT AIR BASIN	U/A

[13] Portion of County in Air Basin, not including Channel Islands

Figure 17


Area Designations for National Ambient Air Quality Standards
LEAD
N
0
50
100
150
200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
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APPENDIX 3.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial
Construction Start Date	10/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80000
Precipitation (days)	1.40000
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.39

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	499.714	1000sqft	11.4719	499,714	306,000	—	—	PC

Parking Lot	482.000	Space	3.18000	0.00000	0.00000	—	—	—
Other Non-Asphalt Surfaces	691.126	1000sqft	15.8661	0.00000	0.00000	—	—	—
User Defined Industrial	499.714	User Defined Unit	0.00000	0.00000	0.00000	—	—	Trucks

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.19643	8.02361	7.23447	13.1491	0.02125	0.27888	1.54096	1.74731	0.25889	0.37057	0.62301	—	3,438.03	3,438.03	0.07630	0.25117	2.70217	3,492.39
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49585	1.46431	1.32029	2.39971	0.00388	0.05089	0.28123	0.31888	0.04725	0.06763	0.11370	—	569.205	569.205	0.01263	0.04158	0.44738	578.204

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
2027	2.35573	2.01637	12.8777	24.8152	0.03937	0.38979	3.22246	3.61225	0.36062	0.77541	1.13603	—	6,954.38	6,954.38	0.15202	0.35187	0.33976	7,063.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.83067	0.70404	7.23447	6.60398	0.02125	0.27888	1.12821	1.40708	0.25889	0.36411	0.62301	—	2,853.78	2,853.78	0.05139	0.25117	1.70386	2,931.62
2027	8.19643	8.02361	6.66702	13.1491	0.01954	0.20635	1.54096	1.74731	0.19078	0.37057	0.56136	—	3,438.03	3,438.03	0.07630	0.16694	2.70217	3,492.39
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.15160	0.12849	1.32029	1.20523	0.00388	0.05089	0.20590	0.25679	0.04725	0.06645	0.11370	—	472.476	472.476	0.00851	0.04158	0.28209	485.363
2027	1.49585	1.46431	1.21673	2.39971	0.00357	0.03766	0.28123	0.31888	0.03482	0.06763	0.10245	—	569.205	569.205	0.01263	0.02764	0.44738	578.204

2.2.2. Onsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	66.3322	65.9438	18.2252	25.4905	0.04180	0.68813	0.00000	0.68813	0.63308	0.00000	0.63308	—	4,318.83	4,318.83	0.17519	0.03504	0.00000	4,333.65
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	5.41210	4.54318	40.6228	42.7354	0.08755	1.79198	5.66228	7.42729	1.64862	2.68618	4.30998	—	9,345.32	9,345.32	0.37909	0.07582	0.00000	9,377.39
2027	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	0.00000	0.36460	0.33543	0.00000	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	0.00000	2,638.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.71844	0.60343	5.38779	5.30758	0.01062	0.24978	0.51864	0.76842	0.22980	0.21149	0.44128	—	1,142.55	1,142.55	0.04635	0.00927	0.00000	1,146.47
2027	7.70256	7.58854	5.34785	7.40975	0.01306	0.19456	0.00000	0.19456	0.17899	0.00000	0.17899	—	1,344.90	1,344.90	0.05456	0.01091	0.00000	1,349.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.13112	0.11013	0.98327	0.96863	0.00194	0.04558	0.09465	0.14024	0.04194	0.03860	0.08053	—	189.162	189.162	0.00767	0.00153	0.00000	189.811
2027	1.40572	1.38491	0.97598	1.35228	0.00238	0.03551	0.00000	0.03551	0.03267	0.00000	0.03267	—	222.664	222.664	0.00903	0.00181	0.00000	223.428

2.2.3. Offsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.42631	1.27625	3.04447	19.8611	0.01630	0.02968	4.05275	4.08243	0.02968	0.97361	1.00329	—	5,765.95	5,765.95	0.04555	0.39189	16.3209	5,900.20
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.43487	1.28688	16.9931	15.7131	0.09685	0.25907	6.71530	6.97437	0.25907	1.66647	1.92554	—	16,591.1	16,591.1	0.06158	2.21765	1.04896	17,254.6
2027	1.02728	0.90440	2.70510	10.7783	0.01383	0.02519	3.22246	3.24764	0.02519	0.77541	0.80059	—	4,324.68	4,324.68	0.04535	0.33053	0.33976	4,424.65
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.11223	0.10062	1.84668	1.29640	0.01063	0.02910	0.60957	0.63866	0.02910	0.15263	0.18172	—	1,711.24	1,711.24	0.00504	0.24190	1.70386	1,785.15
2027	0.49387	0.43507	1.31918	5.73934	0.00647	0.01179	1.54096	1.55275	0.01179	0.37057	0.38237	—	2,093.13	2,093.13	0.02174	0.15603	2.70217	2,142.87
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.02048	0.01836	0.33702	0.23659	0.00194	0.00531	0.11125	0.11656	0.00531	0.02785	0.03316	—	283.315	283.315	0.00084	0.04005	0.28209	295.552
2027	0.09013	0.07940	0.24075	1.04743	0.00118	0.00215	0.28123	0.28338	0.00215	0.06763	0.06978	—	346.541	346.541	0.00360	0.02583	0.44738	354.777

2.3. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

2.4. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Area	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708

Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Area	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.54737	3.17420	10.7417	35.9811	0.15905	0.19726	11.0744	11.2716	0.18745	2.82839	3.01584	—	16,405.1	16,405.1	0.31973	1.38651	20.6434	16,847.0
Area	13.3642	13.2171	0.09019	10.7177	0.00064	0.01904	—	0.01904	0.01439	—	0.01439	—	44.0739	44.0739	0.00185	0.00038	—	44.2329
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	0.24700	0.22477	0.62832	0.57320	0.00108	0.03307	0.00000	0.03307	0.03307	0.00000	0.03307	0.00000	115.002	115.002	0.00462	0.00090	0.00000	115.386
Total	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21
Area	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Energy	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	885.555	885.555	0.08097	0.00536	—	889.175
Water	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

Stationary	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034
Total	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

3. Construction Emissions Details

3.1. Site Preparation (2026)

3.1.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56018	3.83182	34.6139	31.0055	0.05105	1.76500	—	1.76500	1.62380	—	1.62380	—	5,531.64	5,531.64	0.22439	0.04488	—	5,550.63
Dust From Material Movement	—	—	—	—	—	—	5.66228	5.66228	—	2.68618	2.68618	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16242	0.13648	1.23283	1.10430	0.00182	0.06286	—	0.06286	0.05783	—	0.05783	—	197.017	197.017	0.00799	0.00160	—	197.694

Dust From Material Movement	—	—	—	—	—	—	0.20167	0.20167	—	0.09567	0.09567	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02964	0.02491	0.22499	0.20154	0.00033	0.01147	—	0.01147	0.01055	—	0.01055	—	32.6185	32.6185	0.00132	0.00026	—	32.7304
Dust From Material Movement	—	—	—	—	—	—	0.03680	0.03680	—	0.01746	0.01746	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08314	0.07408	0.08488	0.89932	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	221.545	221.545	0.00347	0.00868	0.02194	224.240
Vendor	0.00489	0.00453	0.13214	0.05443	0.00099	0.00180	0.03422	0.03602	0.00180	0.00946	0.01125	—	125.068	125.068	0.00026	0.01707	0.00818	130.170
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00299	0.00268	0.00328	0.03610	0.00000	0.00000	0.00814	0.00814	0.00000	0.00191	0.00191	—	8.12321	8.12321	0.00014	0.00031	0.01301	8.23179
Vendor	0.00018	0.00016	0.00468	0.00191	0.00004	0.00006	0.00122	0.00128	0.00006	0.00034	0.00040	—	4.45165	4.45165	0.00001	0.00061	0.00486	4.63794

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00055	0.00049	0.00060	0.00659	0.00000	0.00000	0.00149	0.00149	0.00000	0.00035	0.00035	—	1.34489	1.34489	0.00002	0.00005	0.00215	1.36287
Vendor	0.00003	0.00003	0.00085	0.00035	0.00001	0.00001	0.00022	0.00023	0.00001	0.00006	0.00007	—	0.73702	0.73702	< 0.000005	0.00010	0.00080	0.76786
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2026)

3.2.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.03197	3.38798	29.9505	28.6693	0.06200	1.38262	—	1.38262	1.27201	—	1.27201	—	6,715.43	6,715.43	0.27241	0.05448	—	6,738.47
Dust From Material Movement	—	—	—	—	—	—	2.69057	2.69057	—	0.98307	0.98307	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47500	0.39913	3.52841	3.37748	0.00730	0.16288	—	0.16288	0.14985	—	0.14985	—	791.133	791.133	0.03209	0.00642	—	793.848

Dust From Material Movement	—	—	—	—	—	—	0.31697	0.31697	—	0.11581	0.11581	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08669	0.07284	0.64393	0.61639	0.00133	0.02973	—	0.02973	0.02735	—	0.02735	—	130.981	130.981	0.00531	0.00106	—	131.431
Dust From Material Movement	—	—	—	—	—	—	0.05785	0.05785	—	0.02114	0.02114	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09502	0.08466	0.09700	1.02780	0.00000	0.00000	0.26142	0.26142	0.00000	0.06128	0.06128	—	253.194	253.194	0.00397	0.00992	0.02508	256.275
Vendor	0.01588	0.01473	0.42944	0.17689	0.00321	0.00585	0.11123	0.11707	0.00585	0.03073	0.03658	—	406.470	406.470	0.00086	0.05549	0.02659	423.053
Hauling	0.25845	0.23564	13.5988	2.96072	0.07981	0.22804	3.12019	3.34823	0.22804	0.79905	1.02709	—	11,523.5	11,523.5	0.01140	1.80912	0.61958	12,063.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01130	0.01013	0.01239	0.13648	0.00000	0.00000	0.03077	0.03077	0.00000	0.00721	0.00721	—	30.7075	30.7075	0.00052	0.00117	0.04920	31.1180
Vendor	0.00190	0.00177	0.05026	0.02057	0.00038	0.00069	0.01309	0.01378	0.00069	0.00362	0.00431	—	47.8552	47.8552	0.00010	0.00654	0.05220	49.8579

Hauling	0.03269	0.02910	1.60339	0.34342	0.00940	0.02686	0.36733	0.39419	0.02686	0.09407	0.12094	—	1,356.78	1,356.78	0.00134	0.21313	1.21526	1,421.54
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00206	0.00185	0.00226	0.02491	0.00000	0.00000	0.00562	0.00562	0.00000	0.00132	0.00132	—	5.08398	5.08398	0.00009	0.00019	0.00814	5.15194
Vendor	0.00035	0.00032	0.00917	0.00375	0.00007	0.00013	0.00239	0.00252	0.00013	0.00066	0.00079	—	7.92297	7.92297	0.00002	0.00108	0.00864	8.25454
Hauling	0.00597	0.00531	0.29262	0.06267	0.00172	0.00490	0.06704	0.07194	0.00490	0.01717	0.02207	—	224.630	224.630	0.00022	0.03529	0.20120	235.352

3.3. Building Construction (2026)

3.3.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.38013	1.15520	10.6724	14.0661	0.02555	0.40936	—	0.40936	0.37661	—	0.37661	—	2,629.89	2,629.89	0.10668	0.02134	—	2,638.91
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08103	0.06782	0.62656	0.82580	0.00150	0.02403	—	0.02403	0.02211	—	0.02211	—	154.397	154.397	0.00626	0.00125	—	154.926
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.01479	0.01238	0.11435	0.15071	0.00027	0.00439	—	0.00439	0.00404	—	0.00404	—	25.5621	25.5621	0.00104	0.00021	—	25.6498
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.99713	0.88840	1.01795	10.7857	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,657.01	2,657.01	0.04164	0.10411	0.26318	2,689.34
Vendor	0.06840	0.06346	1.84991	0.76199	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,750.95	1,750.95	0.00370	0.23902	0.11453	1,822.38
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05908	0.05297	0.06479	0.71375	0.00000	0.00000	0.16091	0.16091	0.00000	0.03772	0.03772	—	160.587	160.587	0.00272	0.00611	0.25727	162.733
Vendor	0.00409	0.00380	0.10789	0.04416	0.00081	0.00148	0.02811	0.02959	0.00148	0.00777	0.00924	—	102.730	102.730	0.00022	0.01403	0.11206	107.029
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01078	0.00967	0.01182	0.13026	0.00000	0.00000	0.02937	0.02937	0.00000	0.00688	0.00688	—	26.5870	26.5870	0.00045	0.00101	0.04259	26.9424
Vendor	0.00075	0.00069	0.01969	0.00806	0.00015	0.00027	0.00513	0.00540	0.00027	0.00142	0.00169	—	17.0082	17.0082	0.00004	0.00232	0.01855	17.7199
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Building Construction (2027)

3.4.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60053	0.50267	4.59855	6.34543	0.01155	0.16482	—	0.16482	0.15163	—	0.15163	—	1,188.77	1,188.77	0.04822	0.00964	—	1,192.85
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10960	0.09174	0.83924	1.15804	0.00211	0.03008	—	0.03008	0.02767	—	0.02767	—	196.815	196.815	0.00798	0.00160	—	197.490
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.05266	0.95317	0.82824	14.9685	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,949.10	2,949.10	0.03239	0.09948	9.18066	2,988.74
Vendor	0.07457	0.05457	1.68966	0.70347	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,710.77	1,710.77	0.00370	0.22519	3.94369	1,781.91
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96011	0.85601	0.92310	10.0477	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,611.99	2,611.99	0.04164	0.10411	0.23747	2,644.30
Vendor	0.06716	0.04840	1.78201	0.73063	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,712.68	1,712.68	0.00370	0.22642	0.10228	1,780.35
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43402	0.38696	0.45599	5.08279	0.00000	0.00000	1.23902	1.23902	0.00000	0.29041	0.29041	—	1,215.46	1,215.46	0.01883	0.04706	1.79287	1,231.75
Vendor	0.03148	0.02299	0.80579	0.32582	0.00625	0.01139	0.21643	0.22781	0.01139	0.05980	0.07119	—	773.726	773.726	0.00167	0.10236	0.76927	805.039
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07921	0.07062	0.08322	0.92761	0.00000	0.00000	0.22612	0.22612	0.00000	0.05300	0.05300	—	201.234	201.234	0.00312	0.00779	0.29683	203.931
Vendor	0.00574	0.00420	0.14706	0.05946	0.00114	0.00208	0.03950	0.04158	0.00208	0.01091	0.01299	—	128.099	128.099	0.00028	0.01695	0.12736	133.283
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Paving (2027)

3.5.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87761	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.25247	0.25247	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07935	0.06667	0.62785	0.89987	0.00126	0.02695	—	0.02695	0.02480	—	0.02480	—	136.621	136.621	0.00554	0.00111	—	137.089
Paving	0.02283	0.02283	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01448	0.01217	0.11458	0.16423	0.00023	0.00492	—	0.00492	0.00453	—	0.00453	—	22.6191	22.6191	0.00092	0.00018	—	22.6967
Paving	0.00417	0.00417	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07523	0.06812	0.05919	1.06979	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	210.771	210.771	0.00231	0.00711	0.65614	213.603
Vendor	0.01332	0.00974	0.30172	0.12562	0.00247	0.00450	0.08556	0.09006	0.00450	0.02364	0.02814	—	305.494	305.494	0.00066	0.04021	0.70423	318.198
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00620	0.00553	0.00652	0.07265	0.00000	0.00000	0.01771	0.01771	0.00000	0.00415	0.00415	—	17.3737	17.3737	0.00027	0.00067	0.02563	17.6065
Vendor	0.00112	0.00082	0.02878	0.01164	0.00022	0.00041	0.00773	0.00814	0.00041	0.00214	0.00254	—	27.6331	27.6331	0.00006	0.00366	0.02747	28.7514
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00113	0.00101	0.00119	0.01326	0.00000	0.00000	0.00323	0.00323	0.00000	0.00076	0.00076	—	2.87642	2.87642	0.00004	0.00011	0.00424	2.91496
Vendor	0.00021	0.00015	0.00525	0.00212	0.00004	0.00007	0.00141	0.00148	0.00007	0.00039	0.00046	—	4.57497	4.57497	0.00001	0.00061	0.00455	4.76012
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Architectural Coating (2027)

3.6.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18287	0.15113	1.10822	1.50052	0.00230	0.02540	—	0.02540	0.02337	—	0.02337	—	178.017	178.017	0.00722	0.00144	—	178.628

Architectural	63.6908	63.6908	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02004	0.01656	0.12145	0.16444	0.00025	0.00278	—	0.00278	0.00256	—	0.00256	—	19.5087	19.5087	0.00079	0.00016	—	19.5757
Architectural Coatings	6.97981	6.97981	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00366	0.00302	0.02216	0.03001	0.00005	0.00051	—	0.00051	0.00047	—	0.00047	—	3.22989	3.22989	0.00013	0.00003	—	3.24097
Architectural Coatings	1.27382	1.27382	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21053	0.19063	0.16565	2.99371	0.00000	0.00000	0.54867	0.54867	0.00000	0.12861	0.12861	—	589.820	589.820	0.00648	0.01990	1.83613	597.747
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02104	0.01876	0.02211	0.24644	0.00000	0.00000	0.06007	0.06007	0.00000	0.01408	0.01408	—	58.9316	58.9316	0.00091	0.00228	0.08693	59.7213
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00384	0.00342	0.00403	0.04498	0.00000	0.00000	0.01096	0.01096	0.00000	0.00257	0.00257	—	9.75680	9.75680	0.00015	0.00038	0.01439	9.88755
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-Rail	4.15146	3.76212	2.30326	48.6373	0.10354	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	10,475.4	10,475.4	0.33718	0.23207	30.8327	10,583.8
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.31016	0.25970	9.35407	2.78402	0.09193	0.19078	3.03890	3.22967	0.18248	0.81104	0.99352	—	9,669.36	9,669.36	0.02474	1.36909	25.3071	10,103.3
Total	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	3.83715	3.45277	2.56232	36.1453	0.09224	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	9,332.15	9,332.15	0.34629	0.24935	0.79931	9,415.91
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.29445	0.24570	9.85783	2.80133	0.09198	0.19089	3.03890	3.22979	0.18259	0.81104	0.99363	—	9,674.11	9,674.11	0.02416	1.37099	0.65660	10,083.9
Total	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.60062	0.54021	0.41656	6.13508	0.01474	0.00634	1.54915	1.55550	0.00584	0.39023	0.39607	—	1,352.55	1,352.55	0.04949	0.03627	1.87712	1,366.48

Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.04678	0.03909	1.54380	0.43146	0.01429	0.02966	0.47192	0.50158	0.02837	0.12596	0.15432	—	1,363.51	1,363.51	0.00344	0.19328	1.54063	1,422.73
Total	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	362.435	362.435	0.03455	0.00419	—	364.546
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0549	19.0549	0.00182	0.00022	—	19.1660
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	381.490	381.490	0.03636	0.00441	—	383.712

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86722	3.56896	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Total	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.96354	1.96354	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.12738	0.12738	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.34805	0.32121	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Total	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.03155	0.02871	0.08027	0.07323	0.00014	0.00422	0.00000	0.00422	0.00422	0.00000	0.00422	0.00000	13.3279	13.3279	0.00054	0.00010	0.00000	13.3724
Fire Pump	0.01352	0.01231	0.03440	0.03138	0.00006	0.00181	0.00000	0.00181	0.00181	0.00000	0.00181	0.00000	5.71196	5.71196	0.00023	0.00004	0.00000	5.73103
Total	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/1/2026	10/19/2026	5.00000	13.0000	—
Grading	Grading	10/20/2026	12/17/2026	5.00000	43.0000	—
Building Construction	Building Construction	12/2/2026	8/19/2027	5.00000	187.000	—

Paving	Paving	8/5/2027	9/20/2027	5.00000	33.0000	—
Architectural Coating	Architectural Coating	7/27/2027	9/20/2027	5.00000	40.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Crawler Tractors	Diesel	Average	4.00000	8.00000	87.0000	0.43000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Grading	Crawler Tractors	Diesel	Average	2.00000	8.00000	87.0000	0.43000
Building Construction	Cranes	Diesel	Average	1.000000	8.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00000	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	13.0000	10.2000	HHDT,MHDT
Grading	Hauling	172.395	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	209.880	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	56.0000	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	10.00000	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	41.9760	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00000	0.00000	749,571	249,857	49,778.8

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5000	0.00000	0.00000
Grading	59,302.0	—	172.000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	19.0461

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Unrefrigerated Warehouse-No Rail	0.00000	0%
Paving	Parking Lot	3.18000	100%
Paving	Other Non-Asphalt Surfaces	15.8661	0%
Paving	User Defined Industrial	0.00000	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00000	346.196	0.03300	0.00400

2027	0.00000	346.196	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790.048	390.776	368.789	245,583	14,396.9	7,121.04	6,720.37	4,475,203
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	114.934	56.9674	53.4694	35,723.5	3,502.05	1,735.80	1,629.21	1,088,495

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Unrefrigerated Warehouse-No Rail	Wood Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Gas Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Propane Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Electric Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	No Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Conventional Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Non-Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0

Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0
Other Non-Asphalt Surfaces	Wood Fireplaces	0	0
Other Non-Asphalt Surfaces	Gas Fireplaces	0	0
Other Non-Asphalt Surfaces	Propane Fireplaces	0	0
Other Non-Asphalt Surfaces	Electric Fireplaces	0	0
Other Non-Asphalt Surfaces	No Fireplaces	0	0
Other Non-Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Non-Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Pellet Wood Stoves	0	0
User Defined Industrial	Wood Fireplaces	0	0
User Defined Industrial	Gas Fireplaces	0	0
User Defined Industrial	Propane Fireplaces	0	0
User Defined Industrial	Electric Fireplaces	0	0
User Defined Industrial	No Fireplaces	0	0
User Defined Industrial	Conventional Wood Stoves	0	0
User Defined Industrial	Catalytic Wood Stoves	0	0
User Defined Industrial	Non-Catalytic Wood Stoves	0	0
User Defined Industrial	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0.00000	0.00000	749,571	249,857	49,778.8

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,308,031	346.196	0.0330	0.0040	9,499,903
Parking Lot	121,344	346.196	0.0330	0.0040	0.00000
Other Non-Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000
User Defined Industrial	0.00000	346.196	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,558,863	6,774,392
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	469.731	0.00000
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.000000	1.000000	50.0000	700.000	0.73000
Fire Pump	Diesel	1.000000	1.000000	50.0000	300.000	0.73000

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6400	annual days of extreme heat
Extreme Precipitation	4.95000	annual days with precipitation above 20 mm
Sea Level Rise	0.00000	meters of inundation depth
Wildfire	22.7300	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.0516
AQ-PM	32.2215
AQ-DPM	57.8843
Drinking Water	29.7490
Lead Risk Housing	13.7996
Pesticides	0.00000
Toxic Releases	24.9687
Traffic	83.1125
Effect Indicators	—
CleanUp Sites	73.3669
Groundwater	0.00000
Haz Waste Facilities/Generators	65.9166
Impaired Water Bodies	0.00000
Solid Waste	0.00000

Sensitive Population	—
Asthma	84.5713
Cardio-vascular	99.4890
Low Birth Weights	5.81216
Socioeconomic Factor Indicators	—
Education	67.1222
Housing	11.2421
Linguistic	19.8674
Poverty	67.1734
Unemployment	82.7434

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Median HI	—
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541

Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3

Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0000

Healthy Places Index Score for Project Location (b)	42.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Based on client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, Building Construction, and Paving
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	4.33800	3.18000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	11/13/2026	10/1/2026
Site Preparation	Site Preparation	End Date	12/11/2026	10/19/2026
Site Preparation	Site Preparation	Work Days per Phase	20.0000	13.0000
Grading	Grading	Start Date	12/12/2026	10/20/2026
Grading	Grading	End Date	2/13/2027	12/17/2026
Grading	Grading	Work Days per Phase	45.0000	43.0000
Building Construction	Building Construction	Start Date	2/14/2027	12/2/2026
Building Construction	Building Construction	End Date	1/14/2029	8/19/2027
Building Construction	Building Construction	Work Days per Phase	500.000	187.000
Paving	Paving	Start Date	1/15/2029	8/5/2027
Paving	Paving	End Date	3/5/2029	9/20/2027
Paving	Paving	Work Days per Phase	35.0000	33.0000
Architectural Coating	Architectural Coating	Start Date	3/6/2029	7/27/2027
Architectural Coating	Architectural Coating	End Date	4/24/2029	9/20/2027
Architectural Coating	Architectural Coating	Work Days per Phase	35.0000	40.0000

8.4.2. Off-Road Equipment

Phase Name	Equipment Type	Model Parameter	Default Value	New Value

Building Construction	Cranes	Hours Per Day	7.00000	8.00000
Building Construction	Tractors/Loaders/Backhoes	Hours Per Day	7.00000	8.00000
Architectural Coating	Air Compressors	Hours Per Day	6.00000	8.00000

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Building Construction	Vendor	One-Way Trips per Day	81.9031	56.0000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	Weekday Trip Rate	size/day	1.74000	1.58100
Unrefrigerated Warehouse-No Rail	Saturday Trip Rate	size/day	1.74000	0.78200
Unrefrigerated Warehouse-No Rail	Sunday Trip Rate	size/day	1.74000	0.73800
User Defined Industrial	Weekday Trip Rate	size/day	0.00000	0.23000
User Defined Industrial	Saturday Trip Rate	size/day	0.00000	0.11400
User Defined Industrial	Sunday Trip Rate	size/day	0.00000	0.10700
User Defined Industrial	Non-Res H-W Trip Length	miles	23.2027	30.4700
User Defined Industrial	Non-Res W-O Trip Length	miles	19.9619	0.00000
User Defined Industrial	Non-Res O-O Trip Length	miles	7.47372	0.00000
User Defined Industrial	Non-Res H-W Trip	%	60.8491	100.0000
User Defined Industrial	Non-Res W-O Trip	%	9.43396	0.00000
User Defined Industrial	Non-Res O-O Trip	%	29.7170	0.00000

8.5.1.2. Fleet Mix

Land Use	Season	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	A	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	A	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	A	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	A	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	S	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 2	%	22%	23%

Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	S	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	S	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	W	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	W	Medium-Duty Trucks	%	16%	17%

Unrefrigerated Warehouse-No Rail	W	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Urban Buses	%	< 0.5%	0%
User Defined Industrial	A	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	A	Passenger Cars	%	49%	0%
User Defined Industrial	A	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	A	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	A	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	A	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	A	Motorcycles	%	3%	0%
User Defined Industrial	A	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	A	Motor Homes	%	1%	0%
User Defined Industrial	A	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	A	Other Buses	%	< 0.5%	0%
User Defined Industrial	A	School Buses	%	< 0.5%	0%
User Defined Industrial	A	Urban Buses	%	< 0.5%	0%
User Defined Industrial	S	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	S	Passenger Cars	%	49%	0%
User Defined Industrial	S	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	S	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	S	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	S	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	S	Motorcycles	%	3%	0%

User Defined Industrial	S	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	S	Motor Homes	%	1%	0%
User Defined Industrial	S	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	S	Other Buses	%	< 0.5%	0%
User Defined Industrial	S	School Buses	%	< 0.5%	0%
User Defined Industrial	S	Urban Buses	%	< 0.5%	0%
User Defined Industrial	W	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	W	Passenger Cars	%	49%	0%
User Defined Industrial	W	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	W	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	W	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	W	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	W	Motorcycles	%	3%	0%
User Defined Industrial	W	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	W	Motor Homes	%	1%	0%
User Defined Industrial	W	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	W	Other Buses	%	< 0.5%	0%
User Defined Industrial	W	School Buses	%	< 0.5%	0%
User Defined Industrial	W	Urban Buses	%	< 0.5%	0%

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Appendix B – Mobile Source Health Risk Assessment

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE

Construction and Operational Health Risk Assessment

Prepared By:

Haseeb Qureshi | hqureshi@urbanxroads.com
Alyssa Barnett | abarnett@urbanxroads.com

Reference Number
14848-04 HRA Report

Agency
City of Hesperia

Date
March 24, 2026

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LIST OF ABBREVIATED TERMS

(1)	Reference
%	Percent
µg	Microgram
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APN	Assessor's Parcel Number
AQIA	Adelanto Industrial Park Air Quality Impact Analysis
ASF	Age Sensitivity Factor
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
City	City of Hesperia
CO	Carbon Monoxide
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
FAH	Fraction of Time at Home
GHG	Greenhouse Gas
HHD	Heavy Heavy-Duty
HI	Hazard Index
HP	Horsepower
HRA	Health Risk Assessment
LHD	Light Heavy-Duty
MDAQMD	Mojave Desert Air Quality Management District
MEIR	Maximally Exposed Individual Receptor
MEIW	Maximally Exposed Individual Worker
MEISC	Maximally Exposed Individual School Child
MHD	Medium Heavy-Duty
MM	Mitigation Measures
NAD	North American Datum
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
PM_{10}	Particulate Matter 10 microns in diameter or less
Project	Amargosa and Palmetto High-Cube Warehouse
REL	Reference Exposure Level
SCAQMD	South Coast Air Quality Management District
SF	Square Feet
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TA	Traffic Analysis

U.S.	United States
URF	Unit Risk Factor
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY

This report evaluates the potential health risk impacts to sensitive receptors (which are residents) and adjacent workers associated with the development of the Project, more specifically, health risk impacts as a result of exposure to Toxic Air Contaminants (TACs) including diesel particulate matter (DPM) as a result of heavy-duty diesel trucks, equipment associated with on-site and off-site construction and operational activity. This section summarizes the significance criteria and Project health risks. The results of the health risk assessment (HRA) from Project-generated DPM are provided in Tables ES-1, ES-2, and ES-3.

ES.1 Project Mitigation Measures

The results of the HRA demonstrate that the Project would not result in a significant health risk impact during construction or operations. Therefore, no mitigation measures are required for HRA purposes.

ES.2 Construction Impacts

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R2 which is located approximately 76 feet north the Project site at an existing residence located at 13164 Avenal Road. R2 is placed in the private outdoor living area (backyard) facing the Project site. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 1.71 in one million, which is less than the Mojave Desert Air Quality Management District's (MDAQMD) significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location.

ES.3 Operational Impacts

Residential Exposure Scenario

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R4 which is located approximately 1,071 feet southeast of the Project site at an existing residence located at 13500 Live Oak Street. Since there are no private outdoor living areas facing the Project site, R4 is placed at the building façade nearest the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.65 in one million, which is less than the MDAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site than the MEIR analyzed herein, and TACs generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences.

Worker Exposure Scenario

The worker receptor land use with the greatest potential exposure to Project operational-source DPM emissions is Location R6, which represents the potential worker receptor approximately 201 feet south of the Project site. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.05 in one million which is less than the MDAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers.

School Exposure Scenario

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on California Air Resources Board (CARB) emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1).

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools within ¼ mile of the Project site. The nearest school is Topaz Preparatory Academy, which is located approximately 5,580 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

ES.4 Construction and Operational Impacts

The land use with the greatest potential increased cancer risk due to exposure to Project construction-source and operational-source DPM emissions is Location R2. At this location, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at 1.98 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location.

TABLE ES-1: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS

Maximum Exposed Location		Cancer Risk				Non-Cancer Risk			
Type	Receptor Location	Time Period (Year)	Maximum Lifetime Cancer Risk[1]	Significance Threshold[1]	Exceeds Significance Threshold?	Time Period	Maximum Hazard Index	Significance Threshold	Exceeds Significance Threshold?
Sensitive Receptor	R2	0.97	1.71	10	NO	Annual Average	<0.01	1	NO

[1] Risk per Million

TABLE ES-2: SUMMARY OF OPERATIONAL CANCER AND NON-CANCER RISKS

Maximum Exposed Location		Cancer Risk				Non-Cancer Risk			
Type	Receptor Location	Time Period (Year)	Maximum Lifetime Cancer Risk[1]	Significance Threshold[1]	Exceeds Significance Threshold?	Time Period	Maximum Hazard Index	Significance Threshold	Exceeds Significance Threshold?
Sensitive Receptor	R2	30	0.65	10	NO	Annual Average	<0.01	1	NO
Worker Receptor	R6	25	0.05	10	NO	Annual Average	<0.01	1	NO

[1] Risk per Million

TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL CANCER AND NON-CANCER RISKS

Maximum Exposed Location		Cancer Risk				Non-Cancer Risk			
Type	Receptor Location	Time Period (Year)	Maximum Lifetime Cancer Risk[1]	Significance Threshold[1]	Exceeds Significance Threshold?	Time Period	Maximum Hazard Index	Significance Threshold	Exceeds Significance Threshold?
Sensitive Receptor	R2	30	1.98	10	NO	Annual Average	<0.01	1	NO

[1] Risk per Million

1 INTRODUCTION

The purpose of this HRA is to evaluate Project-related impacts to nearby sensitive receptors (residents) and workers as a result of heavy-duty diesel trucks accessing the site.

The MDAQMD identifies that if a proposed Project is expected to generate/attract heavy-duty diesel trucks, which emit DPM, preparation of a mobile source HRA is recommended. This document serves to meet the MDAQMD's recommendation for preparation of an HRA. The mobile source HRA has been prepared in accordance with all relevant and appropriate procedures presented by the United States Environmental Protection Agency (U.S. EPA), California EPA and MDAQMD. Cancer risk is expressed in terms of expected incremental incidence per million population. The MDAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to DPM exposure from a project such as the proposed Project. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable impact.

The MDAQMD has also established non-carcinogenic risk parameters for use in HRAs. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. In this HRA, non-carcinogenic exposures of less than 1.0 are considered less-than-significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors below.

1.1 SITE LOCATION

The proposed project is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,714 square high-cube fulfillment center warehouse building as shown on Exhibit 1-2. The proposed project is anticipated to be constructed and fully operational by year 2027.

It is expected that the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related emission sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, stationary and on-site cargo handling equipment. This analysis is intended to describe health risk impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

EXHIBIT 1-A: LOCATION MAP

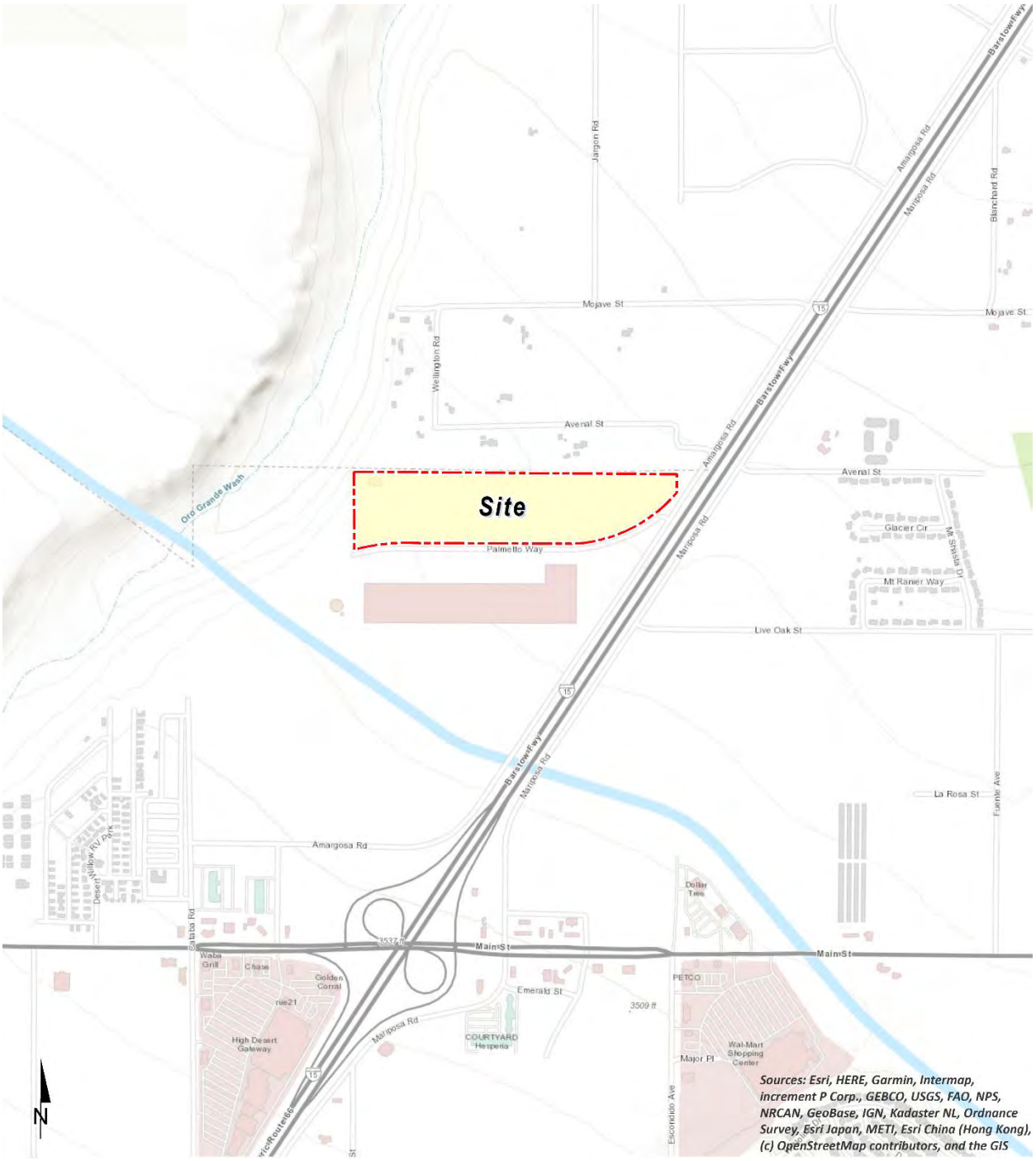
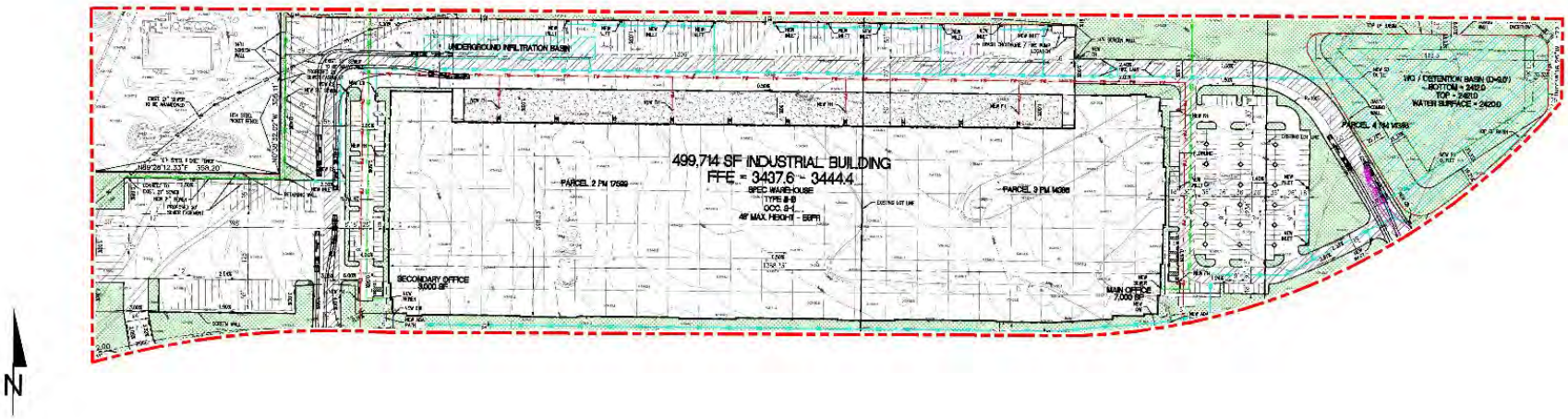


EXHIBIT 1-B: SITE PLAN



2 BACKGROUND

2.1 BACKGROUND ON RECOMMENDED METHODOLOGY

This HRA is based on applicable guidelines to produce conservative estimates of human health risk posed by exposure to DPM. Even though the Project is not within the jurisdiction of the SCAQMD, these recommendations are relevant for CEQA purposes since MDAQMD does not provide similar guidance. The conservative nature of this analysis is due primarily to the following factors:

- The CARB-adopted diesel exhaust Unit Risk Factor (URF) of 300 in one million per $\mu g/m^3$ is based upon the upper 95 percentile of estimated risk for each of the epidemiological studies utilized to develop the URF. Using the 95th percentile URF represents a very conservative (health-protective) risk posed by DPM because it represents breathing rates that are high for the human body.
- The emissions derived assume that every truck accessing the Project site will idle for 15 minutes under the unmitigated scenario, and this is an overestimation of actual idling times and thus conservative[1]. The CARB's anti-idling requirements impose a 5-minute maximum idling time and therefore the analysis conservatively overestimates DPM emissions from idling by a factor of 3.

2.2 CONSTRUCTION HEALTH RISK ASSESSMENT

2.2.1 Emissions Calculations

The emissions calculations for the construction HRA component are based on an assumed mix of construction equipment and hauling activity as presented in the *Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis* (AQIA) prepared by Urban Crossroads, Inc. (2).

Construction related DPM emissions are expected to occur primarily as a function of the operation of heavy-duty construction equipment.

In addition, to support the Project development, there may be paving for off-site improvements associated with roadway construction. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints on the amount of daily activity that could occur. The utility improvement construction schedule and equipment are shown in Tables 2-1 and Table 2-2. Risk associated with utility improvements were analyzed and included as a part of the overall risk. As such, no impacts beyond what has already been identified in this report are expected to occur.

As discussed in the AQIA, the Project would result in approximately 354 total working-days of construction activity. The construction duration by phase is shown in Table 2-1. A detailed summary of construction equipment assumptions by phase is provided at Table 2-2. The CalEEMod emissions

[1] An idling time of 15 minutes per truck has been used per SCAQMD recommendations. Although the Project is required to comply with CARB's idling limit of 5 minutes, the SCAQMD recommends the on-site idling emissions should be estimated for 15 minutes of truck idling, which would take into account on-site idling that occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

outputs are presented in Appendix 2.1. The modeled emission sources for construction activity are illustrated on Exhibit 2-A.

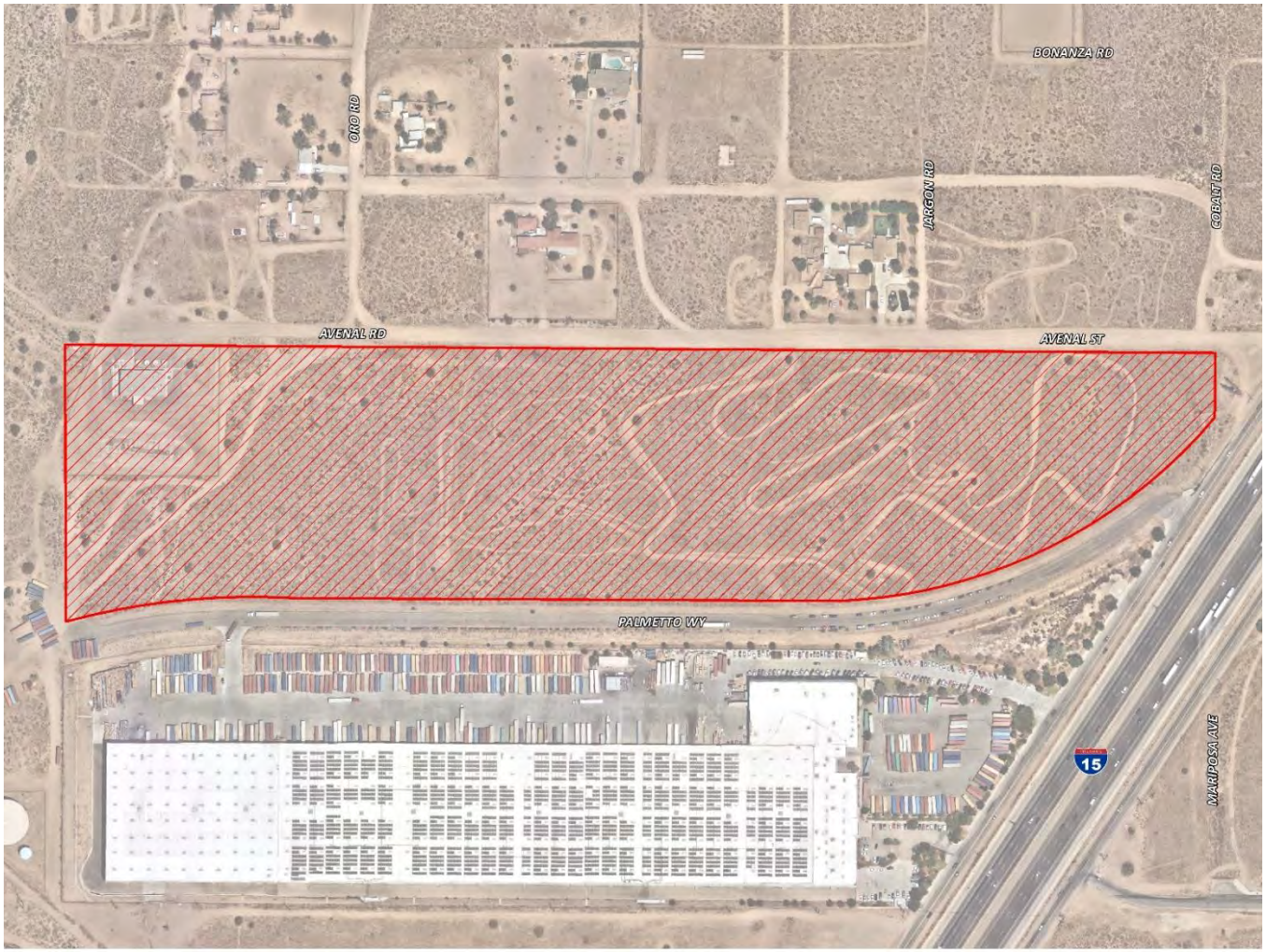
TABLE 2-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40

TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Quantity	Hours
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES



2.3 OPERATIONAL HEALTH RISK ASSESSMENT

2.3.1 On-Site and Off-Site Truck Activity

Vehicle DPM emissions were calculated using emission factors for particulate matter less than 10µm in diameter (PM_{10}) generated with the 2021 version of the EMission FACtor model (EMFAC) developed by the CARB. EMFAC 2021 is a mathematical model that CARB developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources (3). The most recent version of this model, EMFAC 2021, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

Several distinct emission processes are included in EMFAC 2021. Emission factors calculated using EMFAC 2021 are expressed in units of grams per vehicle miles traveled (g/VMT) or grams per idle-hour (g/idle-hr), depending on the emission process. The emission processes and corresponding emission factor units associated with diesel particulate exhaust for this Project are presented below.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC 2021 in EMFAC Mode for vehicles in the San Bernardino County jurisdiction. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. The model was run for speeds traveled in the vicinity of the Project. The vehicle travel speeds for each segment modeled are summarized below:

- Idling – on-site loading/unloading and truck trailer parking areas;
- 5 miles per hour – on-site vehicle movement including driving and maneuvering; and
- 25 miles per hour – off-site vehicle movement including driving and maneuvering.

It is expected that minimal idling would occur at nearby intersections during truck travel on study area roadways (e.g., at an intersection during a red light, or yielding to make a turn). Notwithstanding, the analysis conservatively utilizes a reduced off-site average speed of 25 miles per hour (below the posted speed limit) for travel on study area roadways. Use of a lower average speed for off-site travel results in a higher emission factor and therefore any negligible idling that would occur during truck travel along the study area is accounted for.

Calculated emission factors are shown at Table 2-3. As a conservative measure, a 2027 EMFAC 2021 run was conducted and a static 2027 emissions factor data set was used for the entire duration of analysis herein (e.g., 30 years). Use of 2027 emission factors would overstate potential impacts since this approach assumes that emission factors remain "static" and do not change over time due to fleet turnover or cleaner technology with lower emissions that would be incorporated into vehicles after 2027. Additionally, based on EMFAC 2021, Light-Heavy-Duty Trucks are comprised of 59.56 percent (%) diesel, Medium-Heavy-Duty Trucks are comprised of 75.13% diesel, and Heavy-Heavy-Duty Trucks are comprised of 99.71% diesel. Trucks fueled by diesel are accounted for by these percentages accordingly in the emissions factor generation. Appendix 2.1 includes additional details on the emissions estimates from EMFAC.

As discussed in the AQIA, the analysis incorporated the use of EMFAC 2021 off-model adjustment factors in accordance with CARB guidance. The adjustment factors modify the emission rates utilized in this analysis to reflect the incremental effects of specific adopted regulations and programs relevant to the South Coast Air Basin and are consistent with CARB- and EPA-approved planning methodologies to reflect regulatory programs applicable to heavy-duty vehicles that may not be fully captured in the base EMFAC 2021 model. As such, these adjustments conservatively result in an approximate 3.6% increase in DPM emissions compared to the base EMFAC 2021 model outputs.

The vehicle DPM exhaust emissions were calculated for running exhaust emissions. The running exhaust emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC over the total distance traveled. The following equation was used to estimate off-site emissions for each of the different vehicle classes comprising the mobile sources (4):

$$Emissions_{Speed\ A} = EF_{Run\ Exhaust} \times Distance \times \frac{Number\ of\ Trips\ per\ Day}{Seconds\ per\ Day}$$

Where:

$Emissions_{Speed\ A}$	=	Vehicle emissions at a given speed A (g/s)
$EF_{Run\ Exhaust}$	=	EMFAC running exhaust PM_{10} emission factor at speed A (g/vmt)
$Distance$	=	Total distance traveled per trip (miles)

Similar to off-site traffic, on-site vehicle running emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC and the total vehicle trip number over the length of the driving path using the same formula presented above for on-site emissions. In addition, on-site vehicle idling exhaust emissions were calculated by applying the idle exhaust PM_{10} emission factor (g/idle-hr) from EMFAC and the total truck trip over the total assumed idle time (15 minutes). The following equation was used to estimate the on-site vehicle idling emissions for each of the different vehicle classes :

$$Emissions_{Idle} = EF_{Idle} \times Number\ of\ Trips \times Idling\ Time \times \frac{60\ minutes\ per\ hour}{seconds\ per\ day}$$

Where:

$Emissions_{Idle}$	=	Vehicle emissions during Idling (g/s)
EF_{Idle}	=	EMFAC idle exhaust PM_{10} emission factor (g/s)
$Number\ of\ Trips$	=	Number of trips per day
$Idling\ Time$	=	Idling time (minutes per trip)

TABLE 2-3: 2027 WEIGHTED AVERAGE DPM EMISSIONS FACTORS

Speed	Weighted Average
0 (idling)	0.07876 (g/idle-hr)
5	0.01682 (g/mile)
25	0.00755 (g/mile)

Each roadway was modeled as a line source (made up of multiple adjacent volume sources). Due to the large number of volume sources modeled for this analysis, the corresponding coordinates of each volume source have not been included in this report but are included in Appendix 2.2. The DPM emission rate for each line volume source was calculated by multiplying the emission factor (based on the average travel speed along the roadway) by the number of trips and the distance traveled along each roadway segment, as illustrated in Table 2-4. In order to model idling emissions, line sources were modeled at the building loading docks and tractor trailer parking stalls. The modeled emission sources are illustrated on Exhibit 2-B for on-site sources and Exhibit 2-C for off-site sources. The modeling domain is limited to the Project's primary truck route and includes off-site sources in the study area for more than ¾ mile. This modeling domain is more inclusive and conservative than using only a ¼ mile modeling domain which is the distance supported by several reputable studies which conclude that the greatest potential risks occur within a ¼ mile of the primary source of emissions (1) In the case of the Project, the primary source of emissions is the on-site idling and on-site travel.

On-site truck idling was estimated to occur as trucks enter and travel through the Project site. Although the Project's diesel-fueled truck and equipment operators will be required by State law to comply with CARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions be calculated assuming 15 minutes of truck idling (5), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc. As such, this analysis calculates truck idling at 15 minutes, consistent with SCAQMD's recommendation. Even though the Project is not within the jurisdiction of the SCAQMD, these recommendations are relevant for CEQA purposes since MDAQMD does not provide similar guidance.

As summarized in the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis*, the Project is expected to generate a total of approximately 905 actual vehicular trip-ends per day (452 vehicles inbound + 452 vehicles outbound) which includes 790 passenger vehicle trips (395 passenger vehicles inbound + 395 passenger vehicles outbound) and 115 two-way truck trips (57 trucks inbound per day + 57 trucks outbound) per day (6).

2.3.2 Stationary Sources

The proposed Project was conservatively assumed to include installation of a 300 HP diesel-powered fire pump and a 700 HP diesel-powered emergency generator at each building, as shown on Exhibit 2-B. The generators would be diesel fueled and potentially would result in exposure of sensitive receptors to DPM. The analysis assumed that the fire pumps and emergency generators could potentially operate for up to half hour per day, one day per week, for a total of 50 hours per year for maintenance and testing purposes. Consistent with SCAQMD guidance, the fire pumps and

emergency generators were modeled as a point source. Because detailed engine specifications are not known at this time, release parameters (including exhaust height, diameter, temperature, and flow rate) were obtained from the California Air Pollution Control Officers Association Facility Prioritization Guidelines (7).

EXHIBIT 2-B: MODELED ON-SITE EMISSION SOURCES

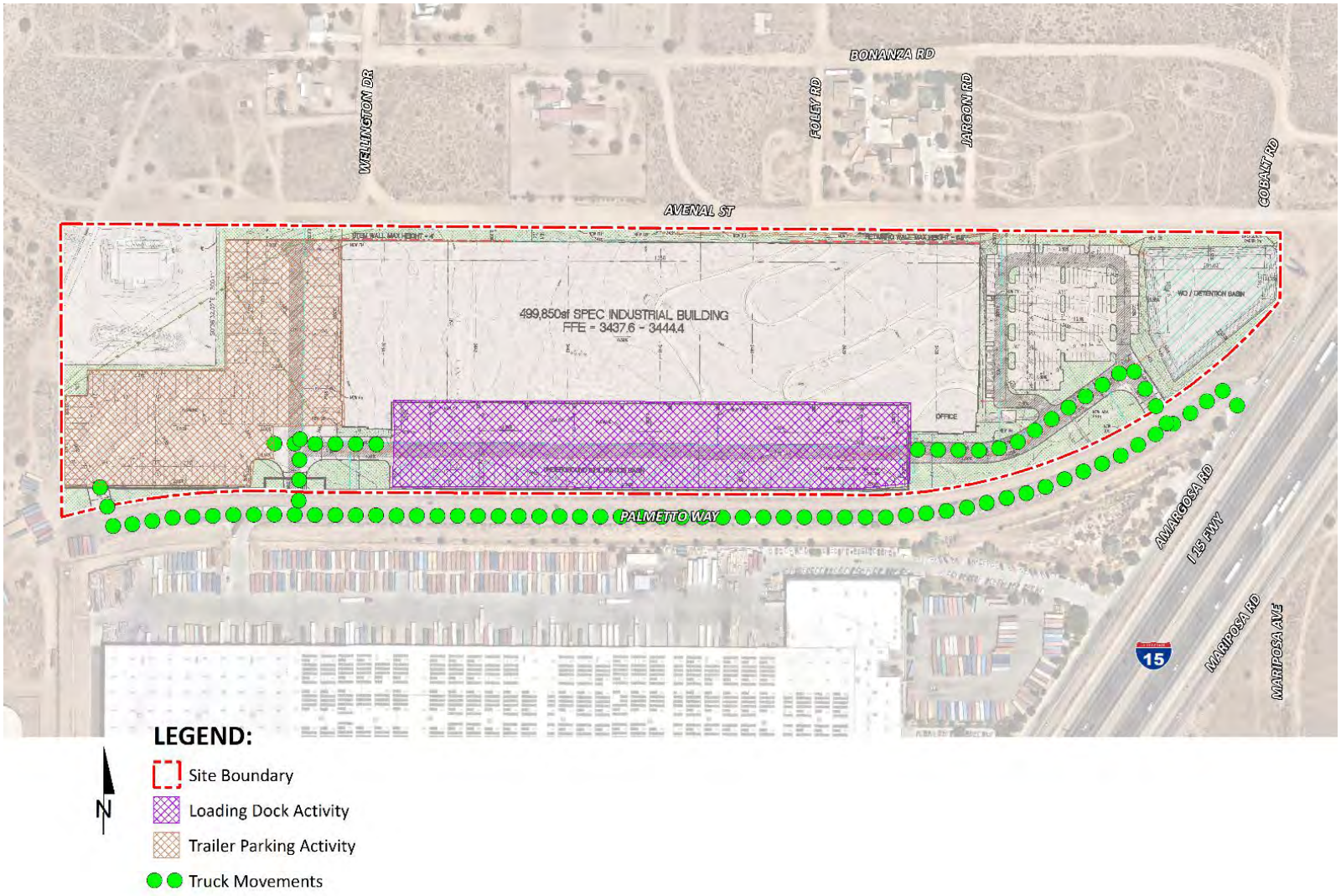


EXHIBIT 2-C: MODELED OFF-SITE EMISSION SOURCES

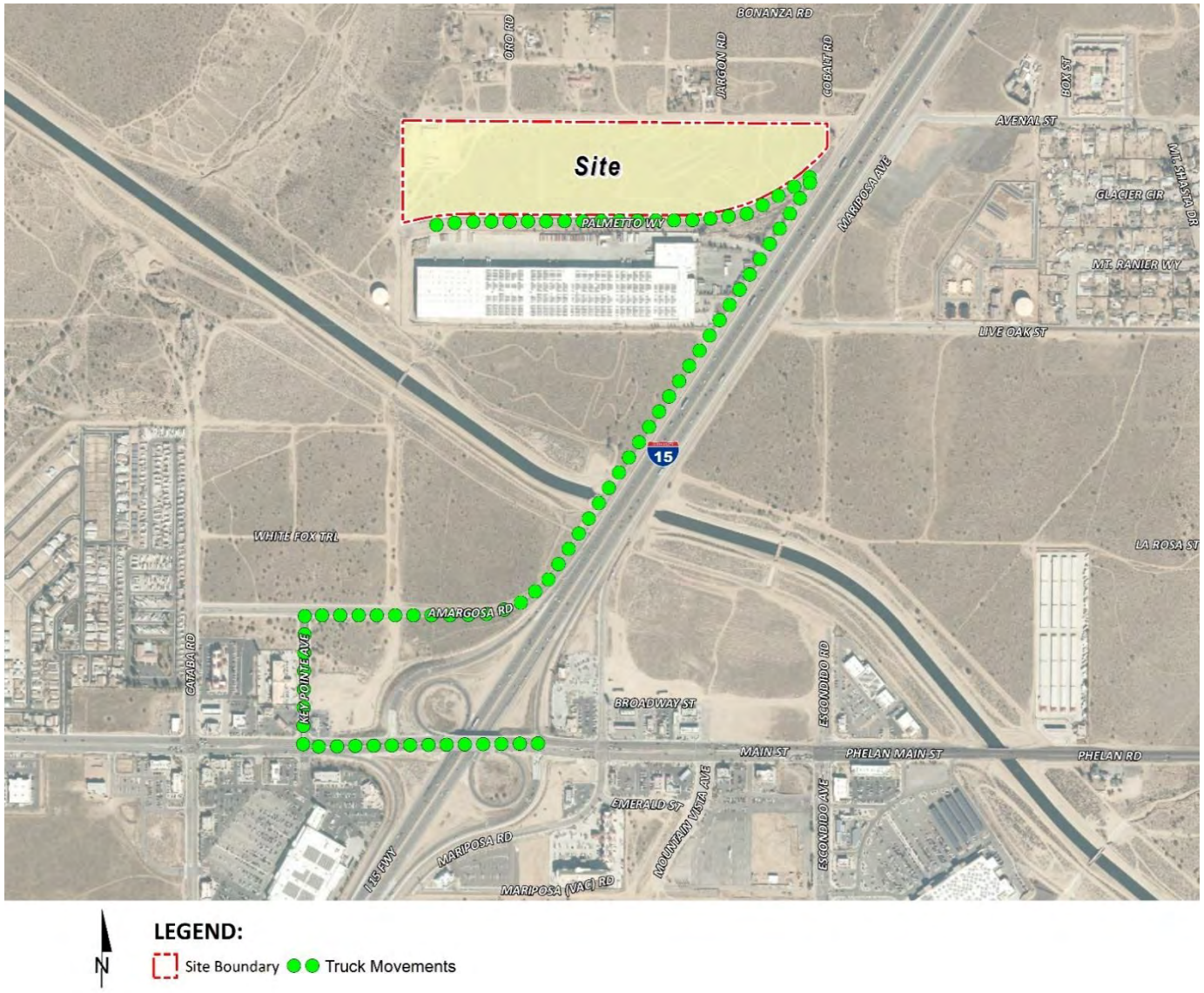


TABLE 2-4: DPM EMISSIONS FROM PROJECT TRUCKS

Source	Trucks Per Day	VMT[1] (miles/day)	Truck Emission Rate[2] (grams/mile)	Truck Emission Rate[2] (grams/idle-hour)	Daily Truck Emissions[3] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling	58	-	-	0.0823	1.18	1.369E-05
On-Site Travel 5%	6	0.84	0.0187	-	0.02	1.831E-07
On-Site Travel 20%	23	1.34	0.0187	-	0.03	2.904E-07
On-Site Travel 75%	86	10.35	0.0187	-	0.19	2.242E-06
On-Site Travel 100%	115	24.82	0.0187	-	0.46	5.378E-06
Off-Site Travel - Palmeto Way 5% Inbound/Outbound	6	0.45	0.0187	-	0.01	9.830E-08
Off-Site Travel - Palmeto Way 25% Inbound/Outbound	29	10.63	0.0187	-	0.20	2.302E-06
Off-Site Travel - Amargosa Road 100% Inbound/Outbound	115	89.98	0.0187	-	1.68	1.949E-05
Off-Site Travel - Main Street 100% Inbound/Outbound	115	66.31	0.0187	-	1.24	1.437E-05

2.4 EXPOSURE QUANTIFICATION

The analysis herein has been conducted in accordance with the guidelines in the Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (8). The U.S. EPA's AERMOD model has been utilized. For purposes of this analysis, the Lakes AERMOD View (Version 12.0.0) was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 23132 (9).

The model offers additional flexibility by allowing the user to assign an initial release height and vertical dispersion parameters for mobile sources representative of a roadway. For this HRA, the roadways were modeled as adjacent volume sources. Roadways were modeled using the U.S. EPA's haul route methodology for modeling of on-site and off-site truck movement. More specifically, the Haul Road Volume Source Calculator in Lakes AERMOD View has been utilized to determine the release height parameters. Based on the US EPA methodology, the Project's modeled sources would result in a release height of 3.49 meters and an initial lateral dimension of 4.0 meters, and an initial vertical dimension of 3.25 meters.

Model parameters are presented in Table 2-5 (10). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the Barstow-Daggett Airport monitoring station located in MDAQMD was used to represent local weather conditions and prevailing winds (11).

TABLE 2-5: AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Rural
Terrain (Flat/Elevated)	Elevated (Regulatory Default)
Averaging Time	1 year (5-year Meteorological Data Set)
Receptor Height	0 meters (Regulatory Default)

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the Project site boundaries, each volume source location, and receptor locations in the Project vicinity. The AERMOD dispersion model summary output files for the Project are presented in Appendix 2.2. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential and worker property and not necessarily the boundaries of the properties containing these uses because the human receptors (residents and workers) spend a majority of their time at the residence or in the workplace's building, and not on the property line. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. For example, the HRA evaluates the potential health risks to residents, workers and school children over a period of 30, 25, or 9 years of exposure, respectively. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the Project site.

Discrete receptors were placed in all directions nearest to the Project site and Project truck routes in order to account for the predominant wind directions in the Project vicinity.

For purposes of this HRA, receptors include both residential and non-residential (worker) land uses in the vicinity of the Project. These receptors are included in the HRA since residents, workers, and school children may be exposed at these locations over a long-term duration of 30, 25, and 9 years, respectively. This methodology is consistent with MDAQMD and OEHHA recommended guidance.

Any impacts to residents or workers located further away from the Project site than the modeled residential and workers in a given direction would have a lesser impact than what has already been disclosed in the HRA at the MEIR, MEISC and MEIW because concentrations dissipate with distance.

All receptors were set to existing elevation height so that only ground-level concentrations are analyzed. United States Geological Survey (USGS) Digital Elevation Model (DEM) terrain data based on a 7.5-minute topographic quadrangle map series using AERMAP was utilized in the HRA modeling to set elevations (12).

Discrete variants for daily breathing rates, exposure frequency, fraction of time at home, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Tables 2-6 through 2-9 summarize the Exposure Parameters for residents and workers based on 2015 OEHHA Guidelines. Appendix 2.3 includes the detailed risk calculation.

TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (CONSTRUCTION ACTIVITY)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
0 to 2	1,090	10	0.97	1.00	250	8

TABLE 2-7: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
-0.25 to 0	361	10	0.25	0.85	350	24
0 to 2	1,090	10	2	0.85	350	24
2 to 16	572	3	14	0.72	350	24
16 to 30	261	1	14	0.73	350	24

TABLE 2-8: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (25 YEAR WORKER)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year)	Exposure Time (hours/day)
16 to 41	230	1	25	250	12

TABLE 2-9: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (9 YEAR SCHOOL CHILD)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year) a	Exposure Time (hours/day)
4 to 13	572	3	9	180	12

[a] To represent the unique characteristics of the school-based population, the assessment employed the U.S. EPA's guidance to develop viable dose estimates based on reasonable maximum exposures (RME). RME's are defined as the "highest exposure that is reasonably expected to occur" for a given receptor population. As a result, lifetime risk values for the student population were adjusted to account for an exposure duration of 180 days per year for nine (9) years. The 9 year exposure duration is also consistent with OEHHA Recommendations and consistent with the exposure duration utilized in school-based risk assessments for various schools within the Los Angeles County Unified School District (LAUSD) that have been accepted by the SCAQMD.

2.5 CARCINOGENIC CHEMICAL RISK

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time.

Guidance from CARB and the California EPA, Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to assess exposures, the following dose algorithm was utilized.

$$DOSE_{AIR} = \left(C_{AIR} \times \frac{BR}{BW} \times A \times EF\right) \times (1 \times 10^{-6})$$

Where:

$DOSE_{AIR}$	=	chronic daily intake (mg/kg/day)
C_{AIR}	=	concentration of contaminant in air (µg/m^3)
$\frac{BR}{BW}$	=	daily breathing rate normalized to body weight (L/kg BW-day)
A	=	inhalation absorption factor
EF	=	exposure frequency (days/365 days)

BW	=	body weight (kg)
1×10^{-6}	=	conversion factors (µg to mg, L to m^3)

$$RISK_{AIR} = DOSE_{AIR} \times CPF \times ASF \times FAH \times \frac{ED}{AT}$$

Where:

$DOSE_{AIR}$	=	chronic daily intake (mg/kg/day)
CPF	=	cancer potency factor
ASF	=	age sensitivity factor
FAH	=	fraction of time at home
ED	=	number of years within particular age group
AT	=	averaging time

2.6 NON-CARCINOGENIC EXPOSURES

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or REL. The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic REL for DPM was established by OEHHA as 5 µg/m^3 (13).

Non-cancer health effects are expressed as a hazard index (HI), which is calculated using the following equation:

$$HI_{DPM} = \frac{C_{DPM}}{REL_{DPM}}$$

Where:

HI_{DPM}	=	Hazard index (unitless)
C_{DPM}	=	Annual average DPM concentration (µg/m^3)
REL_{DPM}	=	REL for DPM (the DPM concentration at which no adverse health effects are anticipated).

2.7 POTENTIAL PROJECT DPM CANCER AND NON-CANCER RISKS

2.7.1 Project-related Receptors

Receptors in the Project study area are described below and shown in Exhibit 2-D. It should be noted that for clarity purposes, the receptors presented in Exhibit 2-D do not represent all modeled receptors and instead presents the nearest receptors that would experience the highest pollutant concentrations. A total of 62 receptors were modeled in the analysis. Appendix 2.4 presents a figure detailing the locations of all receptors as modeled in AERMOD.

R1: Location R1 represents the existing sensitive residence at 13030 Avenal Street, approximately 71 feet north of the Project site. Receptor R1 is placed at the private outdoor living areas (backyards) facing the Project site.

R2: Location R2 represents the existing sensitive residence at 13164 Avenal Road, approximately 76 feet north of the Project site. Receptor R2 is placed at the private outdoor living areas (backyards) facing the Project site.

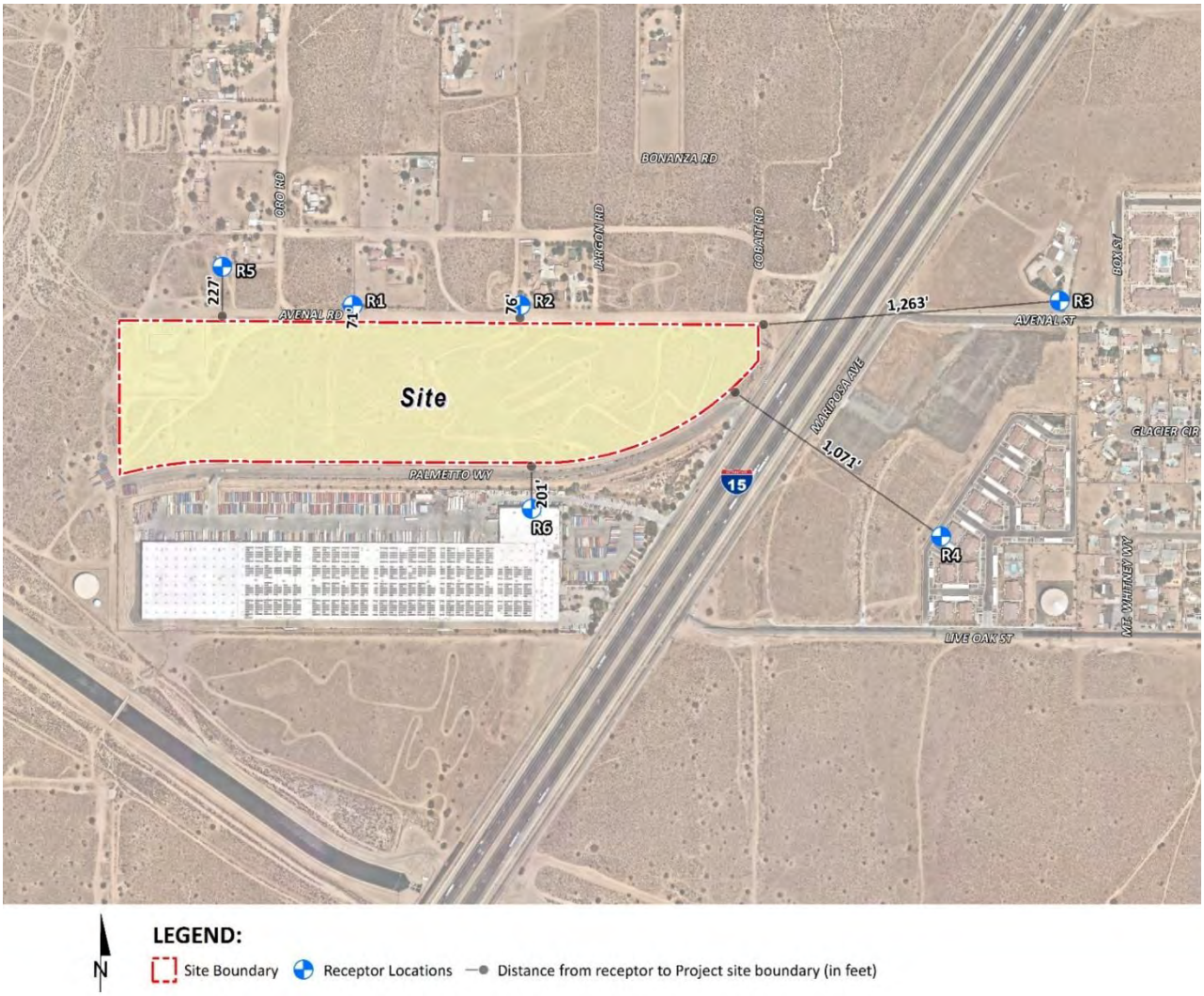
R3: Location R3 represents the existing sensitive residence at 10445 Avenal Street, approximately 1,263 feet east of the Project site. Receptor R3 is placed at the private outdoor living areas (backyards) facing the Project site.

R4: Location R4 represents the existing sensitive residence at 10122 Mt. Whitney Way, approximately 1,071 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receptor R4 is placed at the residential building façade.

R5: Location R5 represents the existing sensitive residence at 10376 Wellington Road, approximately 227 feet north of the Project site Receptor R5 is placed at the private outdoor living areas (backyards) facing the Project site.

R6: Location R6 represents MGA Entertainment, Inc. at 10200 Amargosa Road, approximately 201 feet south of the Project site.

EXHIBIT 2-D: RECEPTOR LOCATIONS



2.7.2 Construction Impacts

Residential Exposure Scenario

The land use with the greatest potential exposure to Project construction DPM source emissions is Location R2 which represents the existing residence located approximately 76 feet north the Project site at an existing residence located at 13164 Avenal Road. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 1.71 in one million. As such, cancer risks at the MEIR associated with the Project are less than the MDAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be ≤0.01, which would not exceed the applicable threshold of 1.0. The MEIR would experience the highest concentrations of DPM during Project construction due to its location and meteorological conditions at the site. Because all other modeled receptors would experience lower concentrations of DPM during Project construction, all other receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location.

2.7.3 Operational Impacts

Residential Exposure Scenario

The land use with the greatest potential exposure to Project operational DPM source emissions is Location R4 which represents the existing residence at 10122 Mt. Whitney Way, approximately 1,071 feet southeast of the Project site. The maximum incremental cancer risk attributable to Project operational-source DPM at the nearest residential receptor is estimated at 0.65 in one million which would not exceed the MDAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be ≤0.01 which would not exceed the applicable significance threshold of 1.0. All other modeled receptors would be exposed to lower concentrations of DPM and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences.

Worker Exposure Scenario

The land use with the greatest potential exposure to Project operational DPM is Location R6 which represents the worker receptor at 10200 Amargosa Road, approximately 201 feet south of the Project site. The maximum incremental cancer risk attributable to Project operational-source DPM at the nearest worker receptor is estimated at 0.05 in one million which would not exceed the MDAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be ≤0.01 which would not exceed the applicable significance threshold of 1.0. MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby workers.

School Exposure Scenario

The nearest school is Topaz Preparatory Academy, which is located approximately 5,580 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would

cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

2.7.4 Construction and Operational Impacts

The land use with the greatest potential exposure to Project construction and operational DPM is Location R2 which represents the existing residence located approximately 76 feet north the Project site at an existing residence located at 13164 Avenal Road. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source and operational-source DPM is estimated at 1.98 in one million, less than the MDAQMD significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be ≤0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location.

3 REFERENCES

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4 CERTIFICATION

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this health risk assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

Haseeb Qureshi
Principal
URBAN CROSSROADS, INC.
1133 Camelback #8329
Newport Beach, CA 92658
hqureshi@urbanxroads.com

Education

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010
Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

Professional Affiliations

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

Professional Certifications

Planned Communities and Urban Infill – Urban Land Institute • June, 2011
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14848-Palmetto Industrial Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial
Construction Start Date	10/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80000
Precipitation (days)	1.40000
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.39

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	499.714	1000sqft	11.4719	499,714	306,000	—	—	PC

Parking Lot	482.000	Space	3.18000	0.00000	0.00000	—	—	—
Other Non-Asphalt Surfaces	691.126	1000sqft	15.8661	0.00000	0.00000	—	—	—
User Defined Industrial	499.714	User Defined Unit	0.00000	0.00000	0.00000	—	—	Trucks

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.19643	8.02361	7.23447	13.1491	0.02125	0.27888	1.54096	1.74731	0.25889	0.37057	0.62301	—	3,438.03	3,438.03	0.07630	0.25117	2.70217	3,492.39
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49585	1.46431	1.32029	2.39971	0.00388	0.05089	0.28123	0.31888	0.04725	0.06763	0.11370	—	569.205	569.205	0.01263	0.04158	0.44738	578.204

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
2027	2.35573	2.01637	12.8777	24.8152	0.03937	0.38979	3.22246	3.61225	0.36062	0.77541	1.13603	—	6,954.38	6,954.38	0.15202	0.35187	0.33976	7,063.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.83067	0.70404	7.23447	6.60398	0.02125	0.27888	1.12821	1.40708	0.25889	0.36411	0.62301	—	2,853.78	2,853.78	0.05139	0.25117	1.70386	2,931.62
2027	8.19643	8.02361	6.66702	13.1491	0.01954	0.20635	1.54096	1.74731	0.19078	0.37057	0.56136	—	3,438.03	3,438.03	0.07630	0.16694	2.70217	3,492.39
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.15160	0.12849	1.32029	1.20523	0.00388	0.05089	0.20590	0.25679	0.04725	0.06645	0.11370	—	472.476	472.476	0.00851	0.04158	0.28209	485.363
2027	1.49585	1.46431	1.21673	2.39971	0.00357	0.03766	0.28123	0.31888	0.03482	0.06763	0.10245	—	569.205	569.205	0.01263	0.02764	0.44738	578.204

2.2.2. Onsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	66.3322	65.9438	18.2252	25.4905	0.04180	0.68813	0.00000	0.68813	0.63308	0.00000	0.63308	—	4,318.83	4,318.83	0.17519	0.03504	0.00000	4,333.65
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	5.41210	4.54318	40.6228	42.7354	0.08755	1.79198	5.66228	7.42729	1.64862	2.68618	4.30998	—	9,345.32	9,345.32	0.37909	0.07582	0.00000	9,377.39
2027	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	0.00000	0.36460	0.33543	0.00000	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	0.00000	2,638.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.71844	0.60343	5.38779	5.30758	0.01062	0.24978	0.51864	0.76842	0.22980	0.21149	0.44128	—	1,142.55	1,142.55	0.04635	0.00927	0.00000	1,146.47
2027	7.70256	7.58854	5.34785	7.40975	0.01306	0.19456	0.00000	0.19456	0.17899	0.00000	0.17899	—	1,344.90	1,344.90	0.05456	0.01091	0.00000	1,349.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.13112	0.11013	0.98327	0.96863	0.00194	0.04558	0.09465	0.14024	0.04194	0.03860	0.08053	—	189.162	189.162	0.00767	0.00153	0.00000	189.811
2027	1.40572	1.38491	0.97598	1.35228	0.00238	0.03551	0.00000	0.03551	0.03267	0.00000	0.03267	—	222.664	222.664	0.00903	0.00181	0.00000	223.428

2.2.3. Offsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.42631	1.27625	3.04447	19.8611	0.01630	0.02968	4.05275	4.08243	0.02968	0.97361	1.00329	—	5,765.95	5,765.95	0.04555	0.39189	16.3209	5,900.20
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.43487	1.28688	16.9931	15.7131	0.09685	0.25907	6.71530	6.97437	0.25907	1.66647	1.92554	—	16,591.1	16,591.1	0.06158	2.21765	1.04896	17,254.6
2027	1.02728	0.90440	2.70510	10.7783	0.01383	0.02519	3.22246	3.24764	0.02519	0.77541	0.80059	—	4,324.68	4,324.68	0.04535	0.33053	0.33976	4,424.65
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.11223	0.10062	1.84668	1.29640	0.01063	0.02910	0.60957	0.63866	0.02910	0.15263	0.18172	—	1,711.24	1,711.24	0.00504	0.24190	1.70386	1,785.15
2027	0.49387	0.43507	1.31918	5.73934	0.00647	0.01179	1.54096	1.55275	0.01179	0.37057	0.38237	—	2,093.13	2,093.13	0.02174	0.15603	2.70217	2,142.87
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.02048	0.01836	0.33702	0.23659	0.00194	0.00531	0.11125	0.11656	0.00531	0.02785	0.03316	—	283.315	283.315	0.00084	0.04005	0.28209	295.552
2027	0.09013	0.07940	0.24075	1.04743	0.00118	0.00215	0.28123	0.28338	0.00215	0.06763	0.06978	—	346.541	346.541	0.00360	0.02583	0.44738	354.777

2.3. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

2.4. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Area	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708

Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Area	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.54737	3.17420	10.7417	35.9811	0.15905	0.19726	11.0744	11.2716	0.18745	2.82839	3.01584	—	16,405.1	16,405.1	0.31973	1.38651	20.6434	16,847.0
Area	13.3642	13.2171	0.09019	10.7177	0.00064	0.01904	—	0.01904	0.01439	—	0.01439	—	44.0739	44.0739	0.00185	0.00038	—	44.2329
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	0.24700	0.22477	0.62832	0.57320	0.00108	0.03307	0.00000	0.03307	0.03307	0.00000	0.03307	0.00000	115.002	115.002	0.00462	0.00090	0.00000	115.386
Total	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21
Area	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Energy	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	885.555	885.555	0.08097	0.00536	—	889.175
Water	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

Stationary	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034
Total	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

3. Construction Emissions Details

3.1. Site Preparation (2026)

3.1.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56018	3.83182	34.6139	31.0055	0.05105	1.76500	—	1.76500	1.62380	—	1.62380	—	5,531.64	5,531.64	0.22439	0.04488	—	5,550.63
Dust From Material Movement	—	—	—	—	—	—	5.66228	5.66228	—	2.68618	2.68618	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16242	0.13648	1.23283	1.10430	0.00182	0.06286	—	0.06286	0.05783	—	0.05783	—	197.017	197.017	0.00799	0.00160	—	197.694

Dust From Material Movement	—	—	—	—	—	—	0.20167	0.20167	—	0.09567	0.09567	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02964	0.02491	0.22499	0.20154	0.00033	0.01147	—	0.01147	0.01055	—	0.01055	—	32.6185	32.6185	0.00132	0.00026	—	32.7304
Dust From Material Movement	—	—	—	—	—	—	0.03680	0.03680	—	0.01746	0.01746	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08314	0.07408	0.08488	0.89932	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	221.545	221.545	0.00347	0.00868	0.02194	224.240
Vendor	0.00489	0.00453	0.13214	0.05443	0.00099	0.00180	0.03422	0.03602	0.00180	0.00946	0.01125	—	125.068	125.068	0.00026	0.01707	0.00818	130.170
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00299	0.00268	0.00328	0.03610	0.00000	0.00000	0.00814	0.00814	0.00000	0.00191	0.00191	—	8.12321	8.12321	0.00014	0.00031	0.01301	8.23179
Vendor	0.00018	0.00016	0.00468	0.00191	0.00004	0.00006	0.00122	0.00128	0.00006	0.00034	0.00040	—	4.45165	4.45165	0.00001	0.00061	0.00486	4.63794

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00055	0.00049	0.00060	0.00659	0.00000	0.00000	0.00149	0.00149	0.00000	0.00035	0.00035	—	1.34489	1.34489	0.00002	0.00005	0.00215	1.36287
Vendor	0.00003	0.00003	0.00085	0.00035	0.00001	0.00001	0.00022	0.00023	0.00001	0.00006	0.00007	—	0.73702	0.73702	< 0.000005	0.00010	0.00080	0.76786
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2026)

3.2.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.03197	3.38798	29.9505	28.6693	0.06200	1.38262	—	1.38262	1.27201	—	1.27201	—	6,715.43	6,715.43	0.27241	0.05448	—	6,738.47
Dust From Material Movement	—	—	—	—	—	—	2.69057	2.69057	—	0.98307	0.98307	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47500	0.39913	3.52841	3.37748	0.00730	0.16288	—	0.16288	0.14985	—	0.14985	—	791.133	791.133	0.03209	0.00642	—	793.848

Dust From Material Movement	—	—	—	—	—	—	0.31697	0.31697	—	0.11581	0.11581	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08669	0.07284	0.64393	0.61639	0.00133	0.02973	—	0.02973	0.02735	—	0.02735	—	130.981	130.981	0.00531	0.00106	—	131.431
Dust From Material Movement	—	—	—	—	—	—	0.05785	0.05785	—	0.02114	0.02114	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09502	0.08466	0.09700	1.02780	0.00000	0.00000	0.26142	0.26142	0.00000	0.06128	0.06128	—	253.194	253.194	0.00397	0.00992	0.02508	256.275
Vendor	0.01588	0.01473	0.42944	0.17689	0.00321	0.00585	0.11123	0.11707	0.00585	0.03073	0.03658	—	406.470	406.470	0.00086	0.05549	0.02659	423.053
Hauling	0.25845	0.23564	13.5988	2.96072	0.07981	0.22804	3.12019	3.34823	0.22804	0.79905	1.02709	—	11,523.5	11,523.5	0.01140	1.80912	0.61958	12,063.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01130	0.01013	0.01239	0.13648	0.00000	0.00000	0.03077	0.03077	0.00000	0.00721	0.00721	—	30.7075	30.7075	0.00052	0.00117	0.04920	31.1180
Vendor	0.00190	0.00177	0.05026	0.02057	0.00038	0.00069	0.01309	0.01378	0.00069	0.00362	0.00431	—	47.8552	47.8552	0.00010	0.00654	0.05220	49.8579

Hauling	0.03269	0.02910	1.60339	0.34342	0.00940	0.02686	0.36733	0.39419	0.02686	0.09407	0.12094	—	1,356.78	1,356.78	0.00134	0.21313	1.21526	1,421.54
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00206	0.00185	0.00226	0.02491	0.00000	0.00000	0.00562	0.00562	0.00000	0.00132	0.00132	—	5.08398	5.08398	0.00009	0.00019	0.00814	5.15194
Vendor	0.00035	0.00032	0.00917	0.00375	0.00007	0.00013	0.00239	0.00252	0.00013	0.00066	0.00079	—	7.92297	7.92297	0.00002	0.00108	0.00864	8.25454
Hauling	0.00597	0.00531	0.29262	0.06267	0.00172	0.00490	0.06704	0.07194	0.00490	0.01717	0.02207	—	224.630	224.630	0.00022	0.03529	0.20120	235.352

3.3. Building Construction (2026)

3.3.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.38013	1.15520	10.6724	14.0661	0.02555	0.40936	—	0.40936	0.37661	—	0.37661	—	2,629.89	2,629.89	0.10668	0.02134	—	2,638.91
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08103	0.06782	0.62656	0.82580	0.00150	0.02403	—	0.02403	0.02211	—	0.02211	—	154.397	154.397	0.00626	0.00125	—	154.926
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.01479	0.01238	0.11435	0.15071	0.00027	0.00439	—	0.00439	0.00404	—	0.00404	—	25.5621	25.5621	0.00104	0.00021	—	25.6498
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.99713	0.88840	1.01795	10.7857	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,657.01	2,657.01	0.04164	0.10411	0.26318	2,689.34
Vendor	0.06840	0.06346	1.84991	0.76199	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,750.95	1,750.95	0.00370	0.23902	0.11453	1,822.38
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05908	0.05297	0.06479	0.71375	0.00000	0.00000	0.16091	0.16091	0.00000	0.03772	0.03772	—	160.587	160.587	0.00272	0.00611	0.25727	162.733
Vendor	0.00409	0.00380	0.10789	0.04416	0.00081	0.00148	0.02811	0.02959	0.00148	0.00777	0.00924	—	102.730	102.730	0.00022	0.01403	0.11206	107.029
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01078	0.00967	0.01182	0.13026	0.00000	0.00000	0.02937	0.02937	0.00000	0.00688	0.00688	—	26.5870	26.5870	0.00045	0.00101	0.04259	26.9424
Vendor	0.00075	0.00069	0.01969	0.00806	0.00015	0.00027	0.00513	0.00540	0.00027	0.00142	0.00169	—	17.0082	17.0082	0.00004	0.00232	0.01855	17.7199
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Building Construction (2027)

3.4.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60053	0.50267	4.59855	6.34543	0.01155	0.16482	—	0.16482	0.15163	—	0.15163	—	1,188.77	1,188.77	0.04822	0.00964	—	1,192.85
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10960	0.09174	0.83924	1.15804	0.00211	0.03008	—	0.03008	0.02767	—	0.02767	—	196.815	196.815	0.00798	0.00160	—	197.490
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.05266	0.95317	0.82824	14.9685	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,949.10	2,949.10	0.03239	0.09948	9.18066	2,988.74
Vendor	0.07457	0.05457	1.68966	0.70347	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,710.77	1,710.77	0.00370	0.22519	3.94369	1,781.91
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96011	0.85601	0.92310	10.0477	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,611.99	2,611.99	0.04164	0.10411	0.23747	2,644.30
Vendor	0.06716	0.04840	1.78201	0.73063	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,712.68	1,712.68	0.00370	0.22642	0.10228	1,780.35
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43402	0.38696	0.45599	5.08279	0.00000	0.00000	1.23902	1.23902	0.00000	0.29041	0.29041	—	1,215.46	1,215.46	0.01883	0.04706	1.79287	1,231.75
Vendor	0.03148	0.02299	0.80579	0.32582	0.00625	0.01139	0.21643	0.22781	0.01139	0.05980	0.07119	—	773.726	773.726	0.00167	0.10236	0.76927	805.039
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07921	0.07062	0.08322	0.92761	0.00000	0.00000	0.22612	0.22612	0.00000	0.05300	0.05300	—	201.234	201.234	0.00312	0.00779	0.29683	203.931
Vendor	0.00574	0.00420	0.14706	0.05946	0.00114	0.00208	0.03950	0.04158	0.00208	0.01091	0.01299	—	128.099	128.099	0.00028	0.01695	0.12736	133.283
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Paving (2027)

3.5.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87761	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.25247	0.25247	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07935	0.06667	0.62785	0.89987	0.00126	0.02695	—	0.02695	0.02480	—	0.02480	—	136.621	136.621	0.00554	0.00111	—	137.089
Paving	0.02283	0.02283	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01448	0.01217	0.11458	0.16423	0.00023	0.00492	—	0.00492	0.00453	—	0.00453	—	22.6191	22.6191	0.00092	0.00018	—	22.6967
Paving	0.00417	0.00417	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07523	0.06812	0.05919	1.06979	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	210.771	210.771	0.00231	0.00711	0.65614	213.603
Vendor	0.01332	0.00974	0.30172	0.12562	0.00247	0.00450	0.08556	0.09006	0.00450	0.02364	0.02814	—	305.494	305.494	0.00066	0.04021	0.70423	318.198
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00620	0.00553	0.00652	0.07265	0.00000	0.00000	0.01771	0.01771	0.00000	0.00415	0.00415	—	17.3737	17.3737	0.00027	0.00067	0.02563	17.6065
Vendor	0.00112	0.00082	0.02878	0.01164	0.00022	0.00041	0.00773	0.00814	0.00041	0.00214	0.00254	—	27.6331	27.6331	0.00006	0.00366	0.02747	28.7514
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00113	0.00101	0.00119	0.01326	0.00000	0.00000	0.00323	0.00323	0.00000	0.00076	0.00076	—	2.87642	2.87642	0.00004	0.00011	0.00424	2.91496
Vendor	0.00021	0.00015	0.00525	0.00212	0.00004	0.00007	0.00141	0.00148	0.00007	0.00039	0.00046	—	4.57497	4.57497	0.00001	0.00061	0.00455	4.76012
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Architectural Coating (2027)

3.6.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18287	0.15113	1.10822	1.50052	0.00230	0.02540	—	0.02540	0.02337	—	0.02337	—	178.017	178.017	0.00722	0.00144	—	178.628

Architectural	63.6908	63.6908	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02004	0.01656	0.12145	0.16444	0.00025	0.00278	—	0.00278	0.00256	—	0.00256	—	19.5087	19.5087	0.00079	0.00016	—	19.5757
Architectural Coatings	6.97981	6.97981	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00366	0.00302	0.02216	0.03001	0.00005	0.00051	—	0.00051	0.00047	—	0.00047	—	3.22989	3.22989	0.00013	0.00003	—	3.24097
Architectural Coatings	1.27382	1.27382	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21053	0.19063	0.16565	2.99371	0.00000	0.00000	0.54867	0.54867	0.00000	0.12861	0.12861	—	589.820	589.820	0.00648	0.01990	1.83613	597.747
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02104	0.01876	0.02211	0.24644	0.00000	0.00000	0.06007	0.06007	0.00000	0.01408	0.01408	—	58.9316	58.9316	0.00091	0.00228	0.08693	59.7213
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00384	0.00342	0.00403	0.04498	0.00000	0.00000	0.01096	0.01096	0.00000	0.00257	0.00257	—	9.75680	9.75680	0.00015	0.00038	0.01439	9.88755
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-Rail	4.15146	3.76212	2.30326	48.6373	0.10354	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	10,475.4	10,475.4	0.33718	0.23207	30.8327	10,583.8
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.31016	0.25970	9.35407	2.78402	0.09193	0.19078	3.03890	3.22967	0.18248	0.81104	0.99352	—	9,669.36	9,669.36	0.02474	1.36909	25.3071	10,103.3
Total	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	3.83715	3.45277	2.56232	36.1453	0.09224	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	9,332.15	9,332.15	0.34629	0.24935	0.79931	9,415.91
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.29445	0.24570	9.85783	2.80133	0.09198	0.19089	3.03890	3.22979	0.18259	0.81104	0.99363	—	9,674.11	9,674.11	0.02416	1.37099	0.65660	10,083.9
Total	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.60062	0.54021	0.41656	6.13508	0.01474	0.00634	1.54915	1.55550	0.00584	0.39023	0.39607	—	1,352.55	1,352.55	0.04949	0.03627	1.87712	1,366.48

Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.04678	0.03909	1.54380	0.43146	0.01429	0.02966	0.47192	0.50158	0.02837	0.12596	0.15432	—	1,363.51	1,363.51	0.00344	0.19328	1.54063	1,422.73
Total	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	362.435	362.435	0.03455	0.00419	—	364.546
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0549	19.0549	0.00182	0.00022	—	19.1660
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	381.490	381.490	0.03636	0.00441	—	383.712

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86722	3.56896	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Total	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.96354	1.96354	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.12738	0.12738	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.34805	0.32121	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Total	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.03155	0.02871	0.08027	0.07323	0.00014	0.00422	0.00000	0.00422	0.00422	0.00000	0.00422	0.00000	13.3279	13.3279	0.00054	0.00010	0.00000	13.3724
Fire Pump	0.01352	0.01231	0.03440	0.03138	0.00006	0.00181	0.00000	0.00181	0.00181	0.00000	0.00181	0.00000	5.71196	5.71196	0.00023	0.00004	0.00000	5.73103
Total	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/1/2026	10/19/2026	5.00000	13.0000	—
Grading	Grading	10/20/2026	12/17/2026	5.00000	43.0000	—
Building Construction	Building Construction	12/2/2026	8/19/2027	5.00000	187.000	—

Paving	Paving	8/5/2027	9/20/2027	5.00000	33.0000	—
Architectural Coating	Architectural Coating	7/27/2027	9/20/2027	5.00000	40.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Crawler Tractors	Diesel	Average	4.00000	8.00000	87.0000	0.43000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Grading	Crawler Tractors	Diesel	Average	2.00000	8.00000	87.0000	0.43000
Building Construction	Cranes	Diesel	Average	1.000000	8.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00000	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	13.0000	10.2000	HHDT,MHDT
Grading	Hauling	172.395	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	209.880	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	56.0000	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	10.00000	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	41.9760	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00000	0.00000	749,571	249,857	49,778.8

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5000	0.00000	0.00000
Grading	59,302.0	—	172.000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	19.0461

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Unrefrigerated Warehouse-No Rail	0.00000	0%
Paving	Parking Lot	3.18000	100%
Paving	Other Non-Asphalt Surfaces	15.8661	0%
Paving	User Defined Industrial	0.00000	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00000	346.196	0.03300	0.00400

2027	0.00000	346.196	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790.048	390.776	368.789	245,583	14,396.9	7,121.04	6,720.37	4,475,203
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	114.934	56.9674	53.4694	35,723.5	3,502.05	1,735.80	1,629.21	1,088,495

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Unrefrigerated Warehouse-No Rail	Wood Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Gas Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Propane Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Electric Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	No Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Conventional Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Non-Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0

Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0
Other Non-Asphalt Surfaces	Wood Fireplaces	0	0
Other Non-Asphalt Surfaces	Gas Fireplaces	0	0
Other Non-Asphalt Surfaces	Propane Fireplaces	0	0
Other Non-Asphalt Surfaces	Electric Fireplaces	0	0
Other Non-Asphalt Surfaces	No Fireplaces	0	0
Other Non-Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Non-Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Pellet Wood Stoves	0	0
User Defined Industrial	Wood Fireplaces	0	0
User Defined Industrial	Gas Fireplaces	0	0
User Defined Industrial	Propane Fireplaces	0	0
User Defined Industrial	Electric Fireplaces	0	0
User Defined Industrial	No Fireplaces	0	0
User Defined Industrial	Conventional Wood Stoves	0	0
User Defined Industrial	Catalytic Wood Stoves	0	0
User Defined Industrial	Non-Catalytic Wood Stoves	0	0
User Defined Industrial	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0.00000	0.00000	749,571	249,857	49,778.8

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,308,031	346.196	0.0330	0.0040	9,499,903
Parking Lot	121,344	346.196	0.0330	0.0040	0.00000
Other Non-Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000
User Defined Industrial	0.00000	346.196	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,558,863	6,774,392
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	469.731	0.00000
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.000000	1.000000	50.0000	700.000	0.73000
Fire Pump	Diesel	1.000000	1.000000	50.0000	300.000	0.73000

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6400	annual days of extreme heat
Extreme Precipitation	4.95000	annual days with precipitation above 20 mm
Sea Level Rise	0.00000	meters of inundation depth
Wildfire	22.7300	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.0516
AQ-PM	32.2215
AQ-DPM	57.8843
Drinking Water	29.7490
Lead Risk Housing	13.7996
Pesticides	0.00000
Toxic Releases	24.9687
Traffic	83.1125
Effect Indicators	—
CleanUp Sites	73.3669
Groundwater	0.00000
Haz Waste Facilities/Generators	65.9166
Impaired Water Bodies	0.00000
Solid Waste	0.00000

Sensitive Population	—
Asthma	84.5713
Cardio-vascular	99.4890
Low Birth Weights	5.81216
Socioeconomic Factor Indicators	—
Education	67.1222
Housing	11.2421
Linguistic	19.8674
Poverty	67.1734
Unemployment	82.7434

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Median HI	—
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541

Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3

Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0000

Healthy Places Index Score for Project Location (b)	42.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Based on client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, Building Construction, and Paving
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	4.33800	3.18000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	11/13/2026	10/1/2026
Site Preparation	Site Preparation	End Date	12/11/2026	10/19/2026
Site Preparation	Site Preparation	Work Days per Phase	20.0000	13.0000
Grading	Grading	Start Date	12/12/2026	10/20/2026
Grading	Grading	End Date	2/13/2027	12/17/2026
Grading	Grading	Work Days per Phase	45.0000	43.0000
Building Construction	Building Construction	Start Date	2/14/2027	12/2/2026
Building Construction	Building Construction	End Date	1/14/2029	8/19/2027
Building Construction	Building Construction	Work Days per Phase	500.000	187.000
Paving	Paving	Start Date	1/15/2029	8/5/2027
Paving	Paving	End Date	3/5/2029	9/20/2027
Paving	Paving	Work Days per Phase	35.0000	33.0000
Architectural Coating	Architectural Coating	Start Date	3/6/2029	7/27/2027
Architectural Coating	Architectural Coating	End Date	4/24/2029	9/20/2027
Architectural Coating	Architectural Coating	Work Days per Phase	35.0000	40.0000

8.4.2. Off-Road Equipment

Phase Name	Equipment Type	Model Parameter	Default Value	New Value

Building Construction	Cranes	Hours Per Day	7.00000	8.00000
Building Construction	Tractors/Loaders/Backhoes	Hours Per Day	7.00000	8.00000
Architectural Coating	Air Compressors	Hours Per Day	6.00000	8.00000

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Building Construction	Vendor	One-Way Trips per Day	81.9031	56.0000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	Weekday Trip Rate	size/day	1.74000	1.58100
Unrefrigerated Warehouse-No Rail	Saturday Trip Rate	size/day	1.74000	0.78200
Unrefrigerated Warehouse-No Rail	Sunday Trip Rate	size/day	1.74000	0.73800
User Defined Industrial	Weekday Trip Rate	size/day	0.00000	0.23000
User Defined Industrial	Saturday Trip Rate	size/day	0.00000	0.11400
User Defined Industrial	Sunday Trip Rate	size/day	0.00000	0.10700
User Defined Industrial	Non-Res H-W Trip Length	miles	23.2027	30.4700
User Defined Industrial	Non-Res W-O Trip Length	miles	19.9619	0.00000
User Defined Industrial	Non-Res O-O Trip Length	miles	7.47372	0.00000
User Defined Industrial	Non-Res H-W Trip	%	60.8491	100.0000
User Defined Industrial	Non-Res W-O Trip	%	9.43396	0.00000
User Defined Industrial	Non-Res O-O Trip	%	29.7170	0.00000

8.5.1.2. Fleet Mix

Land Use	Season	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	A	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	A	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	A	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	A	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	S	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 2	%	22%	23%

Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	S	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	S	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	W	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	W	Medium-Duty Trucks	%	16%	17%

Unrefrigerated Warehouse-No Rail	W	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Urban Buses	%	< 0.5%	0%
User Defined Industrial	A	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	A	Passenger Cars	%	49%	0%
User Defined Industrial	A	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	A	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	A	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	A	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	A	Motorcycles	%	3%	0%
User Defined Industrial	A	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	A	Motor Homes	%	1%	0%
User Defined Industrial	A	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	A	Other Buses	%	< 0.5%	0%
User Defined Industrial	A	School Buses	%	< 0.5%	0%
User Defined Industrial	A	Urban Buses	%	< 0.5%	0%
User Defined Industrial	S	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	S	Passenger Cars	%	49%	0%
User Defined Industrial	S	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	S	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	S	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	S	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	S	Motorcycles	%	3%	0%

User Defined Industrial	S	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	S	Motor Homes	%	1%	0%
User Defined Industrial	S	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	S	Other Buses	%	< 0.5%	0%
User Defined Industrial	S	School Buses	%	< 0.5%	0%
User Defined Industrial	S	Urban Buses	%	< 0.5%	0%
User Defined Industrial	W	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	W	Passenger Cars	%	49%	0%
User Defined Industrial	W	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	W	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	W	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	W	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	W	Motorcycles	%	3%	0%
User Defined Industrial	W	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	W	Motor Homes	%	1%	0%
User Defined Industrial	W	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	W	Other Buses	%	< 0.5%	0%
User Defined Industrial	W	School Buses	%	< 0.5%	0%
User Defined Industrial	W	Urban Buses	%	< 0.5%	0%

Without Mitigation

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly		
On-Site Exhaust PM10	Site Preparation	1.77	13	22.94505377	1.765004136	0.220625517		
	Grading	1.38	43	59.45266383	1.382620089	0.172827511		
	Building Construction	0.39	187	72.36558261	0.386981725	0.048372716		
	Paving	0.30	33	9.838150532	0.298125774	0.037265722		
	Architectural Coating	0.03	40	1.015929732	0.025398243	0.00317478		
								lb/hour/source
		3.86	253	165.6173805	0.654614152	0.081826769		5.11E-03
		Lb/Day	EMFAC AF	# Days				
Off-Site Exhaust PM10	Site Preparation	1.80E-03	1.010705	13	0.02364	0.001818231	0.000227	
	Grading	2.34E-01	1.009257	43	10.15022	0.236051667	0.029506	
	Building Construction	2.52E-02	1.017696	187	4.79305	0.025631285	0.003204	
	Paving	4.50E-03	1.017696	33	0.15104	0.004577015	0.000572	
	Architectural Coating	0.00E+00		40	0.00000	0	0	
								lb/hour/source
		2.65E-01		253	15.11795	0.05975	0.00747	7.47E-03

Phase	Start Date	End Date	No. Days
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40
Total Days of Construction			**253**

Number of Volume Sources	16
Number of Line Sources	1

Option A

AVERAGE EMISSION FACTOR
SAN BERNARDINO COUNTY 2027

Speed	LHD1	LHD2	MHD	HHD
0	0.365241	0.590002	0.035152	0.01035
5	0.04523	0.064051	0.015527	0.01153
25	0.020835	0.030771	0.004361	0.00558

Speed	Weighted Average Emissions
0	**0.08228**
5	**0.01872**
25	**0.00825**

Option A

Truck Emission Rates						
Source	**Trucks Per Day**	**VMT [a] (miles/day)**	**Truck Emission Rate [b] (grams/mile)**	**Truck Emission Rate [b] (grams/idle-hour)**	**Daily Truck Emissions [c] (grams/day)**	**Modeled Emission Rates (g/second)**
On-Site Idling	58			0.0823	1.18	1.369E-05
On-Site Travel 5%	6	0.84	0.0187		0.02	1.831E-07
On-Site Travel 20%	23	1.34	0.0187		0.03	2.904E-07
On-Site Travel 75%	86	10.35	0.0187		0.19	2.242E-06
On-Site Travel 100%	115	24.82	0.0187		0.46	5.378E-06
Off-Site Travel - Palmeto Way 5% Inbound/Outbound	6	0.45	0.0083		0.00	4.335E-08
Off-Site Travel - Palmeto Way 25% Inbound/Outbound	29	10.63	0.0083		0.09	1.015E-06
Off-Site Travel - Amargosa Road 100% Inbound/Outbound	115	89.98	0.0083		0.74	8.596E-06
Off-Site Travel - Main Street 100% Inbound/Outbound	115	66.31	0.0083		0.55	6.335E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2021. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes at loading docks and 5 minutes at parking spaces.

[d] It is assumed that each TRU operates for 2.1 hours while parked at building loading docks.

Option A

calendar_y	season_m	sub_area	vehicle_class	fuel	temperatu	relative_hu	process	speed_tim	pollutant	emission_rate
2027	Annual	San Berna	HHDT	Dsl			IDLEX		PM10	0.010381
2027	Annual	San Berna	HHDT	Dsl	60	70	RUNEX	25	PM10	0.005592
2027	Annual	San Berna	HHDT	Dsl	60	70	RUNEX	5	PM10	0.01156
2027	Annual	San Berna	MHDT	Dsl			IDLEX		PM10	0.045491
2027	Annual	San Berna	MHDT	Dsl	60	70	RUNEX	25	PM10	0.005644
2027	Annual	San Berna	MHDT	Dsl	60	70	RUNEX	5	PM10	0.020094
2027	Annual	San Berna	LHDT2	Dsl			IDLEX		PM10	0.798057
2027	Annual	San Berna	LHDT2	Dsl	60	70	RUNEX	25	PM10	0.041622
2027	Annual	San Berna	LHDT2	Dsl	60	70	RUNEX	5	PM10	0.086637
2027	Annual	San Berna	LHDT1	Dsl			IDLEX		PM10	0.795715
2027	Annual	San Berna	LHDT1	Dsl	60	70	RUNEX	25	PM10	0.045391
2027	Annual	San Berna	LHDT1	Dsl	60	70	RUNEX	5	PM10	0.098538

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (MD)
Calendar Year: 2027
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/year for Combustion VMT and Electric VMT, trips/year for Trips, tons/year for Emissions, 1000 gallons/year for Gasoline and Diesel Fuel Consumption, 1000 diesel equivalent gallons/year for Natural Gas Fuel Consumption, kWh/year for Energy Consumption

Region	Calendar Y	Vehicle Ca	Model Yea	Speed	Fuel	Population
San Berna	2027	HHDT	Aggregate	Aggregate	Gasoline	1.64858
San Berna	2027	HHDT	Aggregate	Aggregate	Diesel	13884.8
San Berna	2027	HHDT	Aggregate	Aggregate	Natural Ga	38.4342
San Berna	2027	LHDT1	Aggregate	Aggregate	Gasoline	12236.9
San Berna	2027	LHDT1	Aggregate	Aggregate	Diesel	10382.6
San Berna	2027	LHDT2	Aggregate	Aggregate	Gasoline	1625.5
San Berna	2027	LHDT2	Aggregate	Aggregate	Diesel	4609.6
San Berna	2027	MHDT	Aggregate	Aggregate	Gasoline	851.499
San Berna	2027	MHDT	Aggregate	Aggregate	Diesel	2894.95
San Berna	2027	MHDT	Aggregate	Aggregate	Natural Ga	10.3388

HHDT% GAS/NG	0.00288
HHDT% DSL	0.99712
LHDT1% GAS	0.54099
LHDT1% DSL	0.45901
LHDT2% GAS	0.2607
LHDT2% DSL	0.7393
MHDT% GAS	0.22728
MHDT% DSL	0.77272

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APPENDIX 2.2:

AERMOD INPUT/OUTPUT

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 3/19/2026
** File: C:\Users\Alyssa Barnett\Desktop\HRA\14848 Palmetto Industrial\14848
Construction\14848 Construction.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14848 Construction.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Main 100%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0009449841
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 9
** 464946.904, 3809792.666, 1064.00, 3.49, 6.51
** 464736.807, 3809792.354, 1066.45, 3.49, 6.51
** 464737.119, 3809533.869, 1070.00, 3.49, 6.51
** 464839.826, 3809535.430, 1069.12, 3.49, 6.51
** 464953.147, 3809541.673, 1068.06, 3.49, 6.51
** 465010.276, 3809542.298, 1068.03, 3.49, 6.51
** 465066.781, 3809543.547, 1068.00, 3.49, 6.51
** 465144.201, 3809541.361, 1068.00, 3.49, 6.51
** 465196.224, 3809538.430, 1067.07, 3.49, 6.51
** ------------------------------------------------------------------------
   LOCATION L0002378     VOLUME   464939.904 3809792.655 1064.15
   LOCATION L0002379     VOLUME   464925.904 3809792.635 1064.36
   LOCATION L0002380     VOLUME   464911.904 3809792.614 1064.59
   LOCATION L0002381     VOLUME   464897.904 3809792.593 1064.85
   LOCATION L0002382     VOLUME   464883.904 3809792.572 1065.00
   LOCATION L0002383     VOLUME   464869.904 3809792.551 1065.00
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   LOCATION VOL5         VOLUME     465441.869  3810684.739     1047.430
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** DESCRSRC
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0009449841
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    LOCATION L0002630     VOLUME   465328.980 3810539.061 1050.72
    LOCATION L0002631     VOLUME   465320.390 3810539.019 1050.85
    LOCATION L0002632     VOLUME   465311.800 3810538.978 1050.97
    LOCATION L0002633     VOLUME   465303.210 3810538.936 1051.13
    LOCATION L0002634     VOLUME   465294.620 3810538.895 1051.29
    LOCATION L0002635     VOLUME   465286.030 3810538.854 1051.45
    LOCATION L0002636     VOLUME   465277.441 3810538.812 1051.61
    LOCATION L0002637     VOLUME   465268.851 3810538.771 1051.73
    LOCATION L0002638     VOLUME   465260.261 3810538.729 1051.85
    LOCATION L0002639     VOLUME   465251.671 3810538.688 1051.98
    LOCATION L0002640     VOLUME   465243.081 3810538.646 1052.00
    LOCATION L0002641     VOLUME   465234.491 3810538.605 1052.00
    LOCATION L0002642     VOLUME   465225.901 3810538.563 1052.00
    LOCATION L0002643     VOLUME   465217.311 3810538.522 1052.00
    LOCATION L0002644     VOLUME   465208.721 3810538.481 1052.00
    LOCATION L0002645     VOLUME   465200.131 3810538.439 1052.00
    LOCATION L0002646     VOLUME   465191.542 3810538.398 1052.00
    LOCATION L0002647     VOLUME   465182.952 3810538.356 1052.23
    LOCATION L0002648     VOLUME   465174.362 3810538.315 1052.52
    LOCATION L0002649     VOLUME   465165.772 3810538.273 1052.81
    LOCATION L0002650     VOLUME   465157.182 3810538.232 1053.00
    LOCATION L0002651     VOLUME   465148.592 3810538.190 1053.00
    LOCATION L0002652     VOLUME   465140.002 3810538.164 1053.00
    LOCATION L0002653     VOLUME   465131.412 3810538.164 1053.00
    LOCATION L0002654     VOLUME   465122.822 3810538.164 1053.24
    LOCATION L0002655     VOLUME   465114.232 3810538.164 1053.53
    LOCATION L0002656     VOLUME   465105.642 3810538.164 1053.81
    LOCATION L0002657     VOLUME   465097.052 3810538.164 1054.00
    LOCATION L0002658     VOLUME   465088.462 3810538.164 1054.00
    LOCATION L0002659     VOLUME   465079.872 3810538.164 1054.00
    LOCATION L0002660     VOLUME   465071.282 3810538.164 1054.00
    LOCATION L0002661     VOLUME   465062.692 3810538.164 1054.00
    LOCATION L0002662     VOLUME   465054.102 3810538.164 1054.00
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   LOCATION L0002664     VOLUME   465036.922 3810538.164 1054.10
   LOCATION L0002665     VOLUME   465028.343 3810537.768 1054.39
   LOCATION L0002666     VOLUME   465019.767 3810537.289 1054.67
   LOCATION L0002667     VOLUME   465011.190 3810536.809 1054.96
   LOCATION L0002668     VOLUME   465002.613 3810536.330 1055.16
   LOCATION L0002669     VOLUME   464994.037 3810535.850 1055.36
   LOCATION L0002670     VOLUME   464985.460 3810535.371 1055.56
   LOCATION L0002671     VOLUME   464976.884 3810534.891 1055.73
   LOCATION L0002672     VOLUME   464968.382 3810533.814 1055.84
   LOCATION L0002673     VOLUME   464959.954 3810532.156 1055.93
   LOCATION L0002674     VOLUME   464951.525 3810530.498 1055.99
** End of LINE VOLUME Source ID = SLINE7
** Source Parameters **
** LINE VOLUME Source ID = SLINE6
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   SRCPARAM L0002380     0.0000143179      3.49      6.51      3.25
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   SRCPARAM L0002440     0.0000143179      3.49      6.51      3.25
   SRCPARAM L0002441     0.0000143179      3.49      6.51      3.25
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   SRCPARAM L0002443     0.0000143179      3.49      6.51      3.25
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   SRCPARAM VOL2         0.0006425892     5.000    21.842     1.400
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   SRCPARAM VOL4         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL5         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL6         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL7         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL8         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL9         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL10        0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL11        0.0006425892     5.000    21.842     1.400
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** LINE VOLUME Source ID = SLINE7
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   SRCPARAM L0002450     0.000004091      3.49      4.00      3.25
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    SRCPARAM L0002593    0.000004091     3.49     4.00     3.25
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    SRCPARAM L0002595    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002596    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002597    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002598    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002599    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002600    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002601    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002602    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002603    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002604    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002605    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002606    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002607    0.000004091     3.49     4.00     3.25
    SRCPARAM L0002608    0.000004091     3.49     4.00     3.25
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661     SRCPARAM L0002610     0.000004091     3.49     4.00     3.25
662     SRCPARAM L0002611     0.000004091     3.49     4.00     3.25
663     SRCPARAM L0002612     0.000004091     3.49     4.00     3.25
664     SRCPARAM L0002613     0.000004091     3.49     4.00     3.25
665     SRCPARAM L0002614     0.000004091     3.49     4.00     3.25
666     SRCPARAM L0002615     0.000004091     3.49     4.00     3.25
667     SRCPARAM L0002616     0.000004091     3.49     4.00     3.25
668     SRCPARAM L0002617     0.000004091     3.49     4.00     3.25
669     SRCPARAM L0002618     0.000004091     3.49     4.00     3.25
670     SRCPARAM L0002619     0.000004091     3.49     4.00     3.25
671     SRCPARAM L0002620     0.000004091     3.49     4.00     3.25
672     SRCPARAM L0002621     0.000004091     3.49     4.00     3.25
673     SRCPARAM L0002622     0.000004091     3.49     4.00     3.25
674     SRCPARAM L0002623     0.000004091     3.49     4.00     3.25
675     SRCPARAM L0002624     0.000004091     3.49     4.00     3.25
676     SRCPARAM L0002625     0.000004091     3.49     4.00     3.25
677     SRCPARAM L0002626     0.000004091     3.49     4.00     3.25
678     SRCPARAM L0002627     0.000004091     3.49     4.00     3.25
679     SRCPARAM L0002628     0.000004091     3.49     4.00     3.25
680     SRCPARAM L0002629     0.000004091     3.49     4.00     3.25
681     SRCPARAM L0002630     0.000004091     3.49     4.00     3.25
682     SRCPARAM L0002631     0.000004091     3.49     4.00     3.25
683     SRCPARAM L0002632     0.000004091     3.49     4.00     3.25
684     SRCPARAM L0002633     0.000004091     3.49     4.00     3.25
685     SRCPARAM L0002634     0.000004091     3.49     4.00     3.25
686     SRCPARAM L0002635     0.000004091     3.49     4.00     3.25
687     SRCPARAM L0002636     0.000004091     3.49     4.00     3.25
688     SRCPARAM L0002637     0.000004091     3.49     4.00     3.25
689     SRCPARAM L0002638     0.000004091     3.49     4.00     3.25
690     SRCPARAM L0002639     0.000004091     3.49     4.00     3.25
691     SRCPARAM L0002640     0.000004091     3.49     4.00     3.25
692     SRCPARAM L0002641     0.000004091     3.49     4.00     3.25
693     SRCPARAM L0002642     0.000004091     3.49     4.00     3.25
694     SRCPARAM L0002643     0.000004091     3.49     4.00     3.25
695     SRCPARAM L0002644     0.000004091     3.49     4.00     3.25
696     SRCPARAM L0002645     0.000004091     3.49     4.00     3.25
697     SRCPARAM L0002646     0.000004091     3.49     4.00     3.25
698     SRCPARAM L0002647     0.000004091     3.49     4.00     3.25
699     SRCPARAM L0002648     0.000004091     3.49     4.00     3.25
700     SRCPARAM L0002649     0.000004091     3.49     4.00     3.25
701     SRCPARAM L0002650     0.000004091     3.49     4.00     3.25
702     SRCPARAM L0002651     0.000004091     3.49     4.00     3.25
703     SRCPARAM L0002652     0.000004091     3.49     4.00     3.25
704     SRCPARAM L0002653     0.000004091     3.49     4.00     3.25
705     SRCPARAM L0002654     0.000004091     3.49     4.00     3.25
706     SRCPARAM L0002655     0.000004091     3.49     4.00     3.25
707     SRCPARAM L0002656     0.000004091     3.49     4.00     3.25
708     SRCPARAM L0002657     0.000004091     3.49     4.00     3.25
709     SRCPARAM L0002658     0.000004091     3.49     4.00     3.25
710     SRCPARAM L0002659     0.000004091     3.49     4.00     3.25
711     SRCPARAM L0002660     0.000004091     3.49     4.00     3.25
712     SRCPARAM L0002661     0.000004091     3.49     4.00     3.25
713     SRCPARAM L0002662     0.000004091     3.49     4.00     3.25
714     SRCPARAM L0002663     0.000004091     3.49     4.00     3.25
715     SRCPARAM L0002664     0.000004091     3.49     4.00     3.25
716     SRCPARAM L0002665     0.000004091     3.49     4.00     3.25
717     SRCPARAM L0002666     0.000004091     3.49     4.00     3.25
718     SRCPARAM L0002667     0.000004091     3.49     4.00     3.25
719     SRCPARAM L0002668     0.000004091     3.49     4.00     3.25
720     SRCPARAM L0002669     0.000004091     3.49     4.00     3.25
721     SRCPARAM L0002670     0.000004091     3.49     4.00     3.25
722     SRCPARAM L0002671     0.000004091     3.49     4.00     3.25
723     SRCPARAM L0002672     0.000004091     3.49     4.00     3.25
724     SRCPARAM L0002673     0.000004091     3.49     4.00     3.25
725     SRCPARAM L0002674     0.000004091     3.49     4.00     3.25
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** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
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   EMISFACT L0002378     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002378     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002378     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002379     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002379     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002379     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002379     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002380     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002380     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002380     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002380     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002381     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002381     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002381     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002381     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002382     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002382     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002382     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002382     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002383     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002383     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002383     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002383     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002384     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002384     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002384     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002384     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002385     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002385     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002385     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002385     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002386     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0002386     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002386     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002387     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002387     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002387     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002387     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002388     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002388     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002388     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002388     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002389     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002389     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002389     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002389     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0002390     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002390     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002391     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002391     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002391     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002391     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002392     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002392     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002392     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002392     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002393     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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793     EMISFACT L0002393     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
794     EMISFACT L0002393     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
795     EMISFACT L0002394     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
796     EMISFACT L0002394     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
797     EMISFACT L0002394     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
798     EMISFACT L0002394     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
799     EMISFACT L0002395     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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801     EMISFACT L0002395     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
802     EMISFACT L0002395     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
803     EMISFACT L0002396     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
804     EMISFACT L0002396     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
805     EMISFACT L0002396     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
806     EMISFACT L0002396     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
807     EMISFACT L0002397     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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809     EMISFACT L0002397     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
810     EMISFACT L0002397     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
811     EMISFACT L0002398     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
812     EMISFACT L0002398     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
813     EMISFACT L0002398     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
814     EMISFACT L0002398     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
815     EMISFACT L0002399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
816     EMISFACT L0002399     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
817     EMISFACT L0002399     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
818     EMISFACT L0002399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
819     EMISFACT L0002400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
820     EMISFACT L0002400     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
821     EMISFACT L0002400     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
822     EMISFACT L0002400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
823     EMISFACT L0002401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
824     EMISFACT L0002401     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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826     EMISFACT L0002401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
827     EMISFACT L0002402     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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831     EMISFACT L0002403     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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853     EMISFACT L0002408     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
854     EMISFACT L0002408     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
855     EMISFACT L0002409     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
856     EMISFACT L0002409     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
857     EMISFACT L0002409     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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    EMISFACT L0002413     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002413     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002414     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002415     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002417     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002419     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002410     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002411     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002411     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002411     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002411     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002412     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002412     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002412     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002412     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002413     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002413     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002413     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002413     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002414     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002414     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002414     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002414     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002415     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002415     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002415     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002415     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002416     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002416     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002416     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002416     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002417     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002417     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002417     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002417     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002418     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002418     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002418     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002418     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002419     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002419     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002419     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002419     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002420     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002420     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002420     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002420     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002421     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002421     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002421     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002421     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
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   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0002444     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002444     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002444     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002444     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002445     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002445     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002445     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002445     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002446     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002446     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002446     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002446     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002447     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002447     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002447     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002447     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0002448     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002448     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002448     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002448     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002449     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002449     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002449     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002449     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002450     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002450     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002450     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002450     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002451     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002451     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002451     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002451     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002452     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002452     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002452     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002452     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002453     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002453     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002453     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002453     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002454     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002454     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002454     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002454     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002455     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002455     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002455     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002455     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002456     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002456     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002456     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002456     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002457     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002457     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002457     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002457     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002458     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002458     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002458     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002458     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002459     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002459     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002459     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002459     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002460     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002460     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002460     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002460     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002461     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002461     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002461     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002461     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002462     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002462     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002462     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002462     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002463     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002463     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002463     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002463     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002464     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002464     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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     EMISFACT L0002464     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002464     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002465     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002465     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002465     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002465     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002466     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002466     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002466     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002466     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002467     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002467     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002467     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002467     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002468     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002468     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002468     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002468     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002469     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002469     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002469     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002469     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002470     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002470     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002470     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002470     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002471     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002471     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002471     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002471     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002472     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002472     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002472     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002472     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002473     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002473     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002473     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002473     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002474     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002474     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002474     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002474     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002475     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002475     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002475     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002475     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002476     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002476     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002476     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002476     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002477     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002477     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002477     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002477     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002478     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002478     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002478     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002478     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002479     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002479     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002479     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002479     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002480     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002480     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002480     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002480     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002481     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002481     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002481     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002481     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002482     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002482     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002482     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002482     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002483     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002483     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002483     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
     EMISFACT L0002483     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002484     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002484     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
     EMISFACT L0002484     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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     EMISFACT L0002635     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002636     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002637     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002637     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002641     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002641     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002642     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002645     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002647     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002655     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002656     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002658     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002659     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002659     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002659     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002660     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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4490      EMISFACT L0002662     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4491      EMISFACT L0002662     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4492      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4493      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4494      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4495      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4496      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4497      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4498      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4499      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4500      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4501      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4502      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4503      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4504      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4505      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4506      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4507      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4508      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4509      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4510      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4511      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4512      EMISFACT L0002668     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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4514      EMISFACT L0002668     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4515      EMISFACT L0002668     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4516      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4517      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4518      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4519      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4520      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4521      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4522      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4523      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4524      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4525      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4526      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4527      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4528      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4529      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4530      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4531      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4532      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4533      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4534      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4535      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4536      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4537      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4538      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4539      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4540      SRCGROUP ALL
4541   SO FINISHED
4542   **
4543   ****************************************
4544   ** AERMOD Receptor Pathway
4545   ****************************************
4546   **
4547   **
4548   RE STARTING
4549      INCLUDED "14848 Construction.rou"
4550   RE FINISHED
4551   **
4552   ****************************************
4553   ** AERMOD Meteorology Pathway
```

```
**************************************
**
**
ME STARTING
   SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
   PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
   SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
   UAIRDATA 3120 2015
   PROFBASE 588.3 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "14848 CONSTRUCTION.AD\PE00GALL.PLT" 31
   SUMMFILE "14848 Construction.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**

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**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 3/19/2026
** File: C:\Users\Alyssa Barnett\Desktop\HRA\14848 Palmetto Industrial\14848
Construction\14848 Construction.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14848 Construction.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Main 100%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0009449841
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 9
** 464946.904, 3809792.666, 1064.00, 3.49, 6.51
** 464736.807, 3809792.354, 1066.45, 3.49, 6.51
** 464737.119, 3809533.869, 1070.00, 3.49, 6.51
** 464839.826, 3809535.430, 1069.12, 3.49, 6.51
** 464953.147, 3809541.673, 1068.06, 3.49, 6.51
** 465010.276, 3809542.298, 1068.03, 3.49, 6.51
** 465066.781, 3809543.547, 1068.00, 3.49, 6.51
** 465144.201, 3809541.361, 1068.00, 3.49, 6.51
** 465196.224, 3809538.430, 1067.07, 3.49, 6.51
** ------------------------------------------------------------------------
   LOCATION L0002378     VOLUME   464939.904 3809792.655 1064.15
   LOCATION L0002379     VOLUME   464925.904 3809792.635 1064.36
   LOCATION L0002380     VOLUME   464911.904 3809792.614 1064.59
   LOCATION L0002381     VOLUME   464897.904 3809792.593 1064.85
   LOCATION L0002382     VOLUME   464883.904 3809792.572 1065.00
   LOCATION L0002383     VOLUME   464869.904 3809792.551 1065.00
   LOCATION L0002384     VOLUME   464855.904 3809792.531 1065.06
   LOCATION L0002385     VOLUME   464841.904 3809792.510 1065.27
   LOCATION L0002386     VOLUME   464827.904 3809792.489 1065.49
   LOCATION L0002387     VOLUME   464813.904 3809792.468 1065.74
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   LOCATION L0002388     VOLUME   464799.904 3809792.447 1066.00
   LOCATION L0002389     VOLUME   464785.904 3809792.427 1066.00
   LOCATION L0002390     VOLUME   464771.904 3809792.406 1066.00
   LOCATION L0002391     VOLUME   464757.904 3809792.385 1066.18
   LOCATION L0002392     VOLUME   464743.904 3809792.364 1066.39
   LOCATION L0002393     VOLUME   464736.815 3809785.451 1066.72
   LOCATION L0002394     VOLUME   464736.832 3809771.451 1067.00
   LOCATION L0002395     VOLUME   464736.849 3809757.451 1067.00
   LOCATION L0002396     VOLUME   464736.866 3809743.451 1067.01
   LOCATION L0002397     VOLUME   464736.883 3809729.451 1067.06
   LOCATION L0002398     VOLUME   464736.900 3809715.451 1067.12
   LOCATION L0002399     VOLUME   464736.916 3809701.451 1067.54
   LOCATION L0002400     VOLUME   464736.933 3809687.451 1067.95
   LOCATION L0002401     VOLUME   464736.950 3809673.451 1068.00
   LOCATION L0002402     VOLUME   464736.967 3809659.451 1068.00
   LOCATION L0002403     VOLUME   464736.984 3809645.451 1068.35
   LOCATION L0002404     VOLUME   464737.001 3809631.451 1068.82
   LOCATION L0002405     VOLUME   464737.018 3809617.451 1069.03
   LOCATION L0002406     VOLUME   464737.035 3809603.451 1069.07
   LOCATION L0002407     VOLUME   464737.052 3809589.451 1069.29
   LOCATION L0002408     VOLUME   464737.069 3809575.451 1069.71
   LOCATION L0002409     VOLUME   464737.086 3809561.451 1070.00
   LOCATION L0002410     VOLUME   464737.102 3809547.451 1070.00
   LOCATION L0002411     VOLUME   464737.537 3809533.875 1070.01
   LOCATION L0002412     VOLUME   464751.535 3809534.088 1070.00
   LOCATION L0002413     VOLUME   464765.534 3809534.301 1070.00
   LOCATION L0002414     VOLUME   464779.532 3809534.514 1070.00
   LOCATION L0002415     VOLUME   464793.530 3809534.726 1070.00
   LOCATION L0002416     VOLUME   464807.529 3809534.939 1069.76
   LOCATION L0002417     VOLUME   464821.527 3809535.152 1069.30
   LOCATION L0002418     VOLUME   464835.526 3809535.364 1069.02
   LOCATION L0002419     VOLUME   464849.510 3809535.963 1069.00
   LOCATION L0002420     VOLUME   464863.489 3809536.734 1068.97
   LOCATION L0002421     VOLUME   464877.468 3809537.504 1068.95
   LOCATION L0002422     VOLUME   464891.447 3809538.274 1068.92
   LOCATION L0002423     VOLUME   464905.426 3809539.044 1068.90
   LOCATION L0002424     VOLUME   464919.404 3809539.814 1068.87
   LOCATION L0002425     VOLUME   464933.383 3809540.585 1068.47
   LOCATION L0002426     VOLUME   464947.362 3809541.355 1068.07
   LOCATION L0002427     VOLUME   464961.353 3809541.763 1068.00
   LOCATION L0002428     VOLUME   464975.352 3809541.916 1068.00
   LOCATION L0002429     VOLUME   464989.351 3809542.069 1068.00
   LOCATION L0002430     VOLUME   465003.350 3809542.222 1068.00
   LOCATION L0002431     VOLUME   465017.348 3809542.454 1068.00
   LOCATION L0002432     VOLUME   465031.345 3809542.763 1068.00
   LOCATION L0002433     VOLUME   465045.341 3809543.073 1067.96
   LOCATION L0002434     VOLUME   465059.338 3809543.382 1067.84
   LOCATION L0002435     VOLUME   465073.333 3809543.362 1067.75
   LOCATION L0002436     VOLUME   465087.328 3809542.967 1067.77
   LOCATION L0002437     VOLUME   465101.322 3809542.572 1067.78
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   LOCATION L0002439     VOLUME   465129.311 3809541.782 1067.81
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   LOCATION VOL3         VOLUME     465253.570  3810684.400     1050.000
   LOCATION VOL4         VOLUME     465347.889  3810684.400     1048.530
   LOCATION VOL5         VOLUME     465441.869  3810684.739     1047.430
   LOCATION VOL6         VOLUME     465535.509  3810685.417     1046.000
   LOCATION VOL7         VOLUME     465629.489  3810685.417     1044.800
   LOCATION VOL8         VOLUME     465680.041  3810685.417     1044.460
   LOCATION VOL9         VOLUME     465610.828  3810631.812     1046.000
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   LOCATION VOL16        VOLUME     464963.149  3810591.438     1055.000
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** DESCRSRC
** PREFIX
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** Configuration = Adjacent
** Emission Rate = 0.0009449841
** Vertical Dimension = 6.99
** SZINIT = 3.25
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   LOCATION L0002672     VOLUME   464968.382 3810533.814 1055.84
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** Source Parameters **
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   SRCPARAM L0002384     0.0000143179      3.49      6.51      3.25
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   SRCPARAM VOL2         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL3         0.0006425892     5.000    21.842     1.400
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   SRCPARAM VOL5         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL6         0.0006425892     5.000    21.842     1.400
   SRCPARAM VOL7         0.0006425892     5.000    21.842     1.400
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** LINE VOLUME Source ID = SLINE7
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   SRCPARAM L0002451     0.000004091      3.49      4.00      3.25
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695     SRCPARAM L0002644     0.000004091     3.49     4.00     3.25
696     SRCPARAM L0002645     0.000004091     3.49     4.00     3.25
697     SRCPARAM L0002646     0.000004091     3.49     4.00     3.25
698     SRCPARAM L0002647     0.000004091     3.49     4.00     3.25
699     SRCPARAM L0002648     0.000004091     3.49     4.00     3.25
700     SRCPARAM L0002649     0.000004091     3.49     4.00     3.25
701     SRCPARAM L0002650     0.000004091     3.49     4.00     3.25
702     SRCPARAM L0002651     0.000004091     3.49     4.00     3.25
703     SRCPARAM L0002652     0.000004091     3.49     4.00     3.25
704     SRCPARAM L0002653     0.000004091     3.49     4.00     3.25
705     SRCPARAM L0002654     0.000004091     3.49     4.00     3.25
706     SRCPARAM L0002655     0.000004091     3.49     4.00     3.25
707     SRCPARAM L0002656     0.000004091     3.49     4.00     3.25
708     SRCPARAM L0002657     0.000004091     3.49     4.00     3.25
709     SRCPARAM L0002658     0.000004091     3.49     4.00     3.25
710     SRCPARAM L0002659     0.000004091     3.49     4.00     3.25
711     SRCPARAM L0002660     0.000004091     3.49     4.00     3.25
712     SRCPARAM L0002661     0.000004091     3.49     4.00     3.25
713     SRCPARAM L0002662     0.000004091     3.49     4.00     3.25
714     SRCPARAM L0002663     0.000004091     3.49     4.00     3.25
715     SRCPARAM L0002664     0.000004091     3.49     4.00     3.25
716     SRCPARAM L0002665     0.000004091     3.49     4.00     3.25
717     SRCPARAM L0002666     0.000004091     3.49     4.00     3.25
718     SRCPARAM L0002667     0.000004091     3.49     4.00     3.25
719     SRCPARAM L0002668     0.000004091     3.49     4.00     3.25
720     SRCPARAM L0002669     0.000004091     3.49     4.00     3.25
721     SRCPARAM L0002670     0.000004091     3.49     4.00     3.25
722     SRCPARAM L0002671     0.000004091     3.49     4.00     3.25
723     SRCPARAM L0002672     0.000004091     3.49     4.00     3.25
724     SRCPARAM L0002673     0.000004091     3.49     4.00     3.25
725     SRCPARAM L0002674     0.000004091     3.49     4.00     3.25
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** ------------------------------------------------------------------

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT L0002378     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002378     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002378     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002378     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002379     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002379     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002379     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002379     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002380     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002380     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002380     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002380     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002381     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002381     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002381     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002381     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002382     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002382     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002382     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002382     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002383     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002383     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002383     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002383     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002384     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002384     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002384     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002384     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002385     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002385     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002385     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002385     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002386     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002386     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002386     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002386     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002387     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002387     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002387     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002387     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002388     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002388     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002388     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002388     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002389     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002389     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002389     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002389     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002390     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002390     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002390     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002390     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002391     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002391     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002391     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002391     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002392     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002392     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002392     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002392     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002393     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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792     EMISFACT L0002393     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
793     EMISFACT L0002393     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
794     EMISFACT L0002393     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
795     EMISFACT L0002394     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
796     EMISFACT L0002394     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
797     EMISFACT L0002394     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
798     EMISFACT L0002394     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
799     EMISFACT L0002395     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
800     EMISFACT L0002395     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
801     EMISFACT L0002395     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
802     EMISFACT L0002395     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
803     EMISFACT L0002396     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
804     EMISFACT L0002396     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
805     EMISFACT L0002396     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
806     EMISFACT L0002396     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
807     EMISFACT L0002397     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
808     EMISFACT L0002397     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
809     EMISFACT L0002397     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
810     EMISFACT L0002397     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
811     EMISFACT L0002398     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
812     EMISFACT L0002398     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
813     EMISFACT L0002398     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
814     EMISFACT L0002398     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
815     EMISFACT L0002399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
816     EMISFACT L0002399     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
817     EMISFACT L0002399     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
818     EMISFACT L0002399     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
819     EMISFACT L0002400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
820     EMISFACT L0002400     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
821     EMISFACT L0002400     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
822     EMISFACT L0002400     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
823     EMISFACT L0002401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
824     EMISFACT L0002401     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
825     EMISFACT L0002401     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
826     EMISFACT L0002401     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
827     EMISFACT L0002402     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
828     EMISFACT L0002402     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
829     EMISFACT L0002402     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
830     EMISFACT L0002402     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
831     EMISFACT L0002403     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
832     EMISFACT L0002403     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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834     EMISFACT L0002403     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
835     EMISFACT L0002404     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
836     EMISFACT L0002404     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
837     EMISFACT L0002404     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
838     EMISFACT L0002404     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
839     EMISFACT L0002405     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
840     EMISFACT L0002405     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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845     EMISFACT L0002406     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
846     EMISFACT L0002406     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
847     EMISFACT L0002407     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
848     EMISFACT L0002407     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
849     EMISFACT L0002407     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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851     EMISFACT L0002408     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
852     EMISFACT L0002408     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
853     EMISFACT L0002408     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
854     EMISFACT L0002408     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
855     EMISFACT L0002409     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
856     EMISFACT L0002409     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
857     EMISFACT L0002409     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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    EMISFACT L0002413     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002414     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002417     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002418     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002421     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002422     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
    EMISFACT L0002422     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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    EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002424     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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    EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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    EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002427     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
    EMISFACT L0002427     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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    EMISFACT L0002428     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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    EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002429     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
    EMISFACT L0002429     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
    EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002430     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
    EMISFACT L0002430     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
    EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002422     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002423     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002424     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002425     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002426     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002427     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002428     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002429     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002430     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002431     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002432     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002433     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002434     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002435     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002436     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002437     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002438     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002439     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002440     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002441     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002442     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002443     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
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   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0002444     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002444     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002444     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002444     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002445     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002445     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002445     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002445     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002446     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002446     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002446     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002446     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002447     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0002447     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0002447     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0002447     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0002448     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002448     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002448     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002448     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002449     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002449     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002449     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002449     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002450     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0002450     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0002450     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0002450     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0002451     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0002464     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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     EMISFACT L0002647     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002647     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002647     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002647     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002648     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002648     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002648     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002648     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002649     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002649     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002649     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002650     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002650     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002650     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002650     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002651     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002651     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002651     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002651     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002652     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002652     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002652     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002652     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002653     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002653     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002653     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002653     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002654     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002654     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002654     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002654     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002655     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002655     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002655     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002655     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002656     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002656     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002656     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002656     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002657     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002657     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002657     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002657     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002658     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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     EMISFACT L0002658     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002658     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002659     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002659     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002659     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002659     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002660     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002660     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002660     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002660     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT L0002661     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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4488      EMISFACT L0002662     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4489      EMISFACT L0002662     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4490      EMISFACT L0002662     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4491      EMISFACT L0002662     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4492      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4493      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4494      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4495      EMISFACT L0002663     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4496      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4497      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4498      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4499      EMISFACT L0002664     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4500      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4501      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4502      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4503      EMISFACT L0002665     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4504      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4505      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4506      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4507      EMISFACT L0002666     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4508      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4509      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4510      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4511      EMISFACT L0002667     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4512      EMISFACT L0002668     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4513      EMISFACT L0002668     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4514      EMISFACT L0002668     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4515      EMISFACT L0002668     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4516      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4517      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4518      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4519      EMISFACT L0002669     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4520      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4521      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4522      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4523      EMISFACT L0002670     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4524      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4525      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4526      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4527      EMISFACT L0002671     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4528      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4529      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4530      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4531      EMISFACT L0002672     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4532      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4533      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4534      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4535      EMISFACT L0002673     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4536      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4537      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4538      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4539      EMISFACT L0002674     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
4540      SRCGROUP ALL
4541   SO FINISHED
4542   **
4543   ****************************************
4544   ** AERMOD Receptor Pathway
4545   ****************************************
4546   **
4547   **
4548   RE STARTING
4549      INCLUDED "14848 Construction.rou"
4550   RE FINISHED
4551   **
4552   ****************************************
4553   ** AERMOD Meteorology Pathway
```

```
**************************************
**
**
ME STARTING
   SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
   PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
   SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
   UAIRDATA 3120 2015
   PROFBASE 588.3 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "14848 CONSTRUCTION.AD\PE00GALL.PLT" 31
   SUMMFILE "14848 Construction.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    4563       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187    4563       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 17:45:50

                              PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                            ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
```

```
4613         * Stack-tip Downwash.
4614         * Model Accounts for ELEVated Terrain Effects.
4615         * Use Calms Processing Routine.
4616         * Use Missing Data Processing Routine.
4617         * No Exponential Decay.
4618         * Model Uses RURAL Dispersion Only.
4619         * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
4620         * CCVR_Sub - Meteorological data includes CCVR substitutions
4621         * TEMP_Sub - Meteorological data includes TEMP substitutions
4622         * Model Assumes No FLAGPOLE Receptor Heights.
4623         * The User Specified a Pollutant Type of: DPM
4624
4625    **Model Calculates PERIOD Averages Only
4626
4627    **This Run Includes:    313 Source(s);       1 Source Group(s); and      39 Receptor(s)
4628
4629                   with:      0 POINT(s), including
4630                              0 POINTCAP(s) and      0 POINTHOR(s)
4631                    and:    313 VOLUME source(s)
4632                    and:      0 AREA type source(s)
4633                    and:      0 LINE source(s)
4634                    and:      0 RLINE/RLINEXT source(s)
4635                    and:      0 OPENPIT source(s)
4636                    and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
4637                    and:      0 SWPOINT source(s)
4638
4639
4640    **Model Set To Continue RUNning After the Setup Testing.
4641
4642    **The AERMET Input Meteorological Data Version Date:  19191
4643
4644    **Output Options Selected:
4645             Model Outputs Tables of PERIOD Averages by Receptor
4646             Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
4647             Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
4648
4649    **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
4650                                                                    m for Missing Hours
4651                                                                    b for Both Calm and
                                                                       Missing Hours
4652
4653    **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   588.30 ;  Decay Coef.
       =    0.000     ;  Rot. Angle =     0.0
4654                     Emission Units = GRAMS/SEC                              ;  Emission
                         Rate Unit Factor =   0.10000E+07
4655                     Output Units   = MICROGRAMS/M**3
4656
4657    **Approximate Storage Requirements of Model =      3.8 MB of RAM.
4658
4659    **Input Runstream File:
       aermod.inp

4660    **Output Print File:
       aermod.out

4661
4662    **Detailed Error/Message File:   14848
       Construction.err

4663    **File for Summary of Results:   14848
       Construction.sum

4664    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
4665    *** AERMET - VERSION  19191 ***
       ***                                                                    ***
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER INIT. PART. CATS.	EMISSION RATE (GRAMS/SEC)	URBAN SOURCE	SCALAR VARY BY	X (METERS)	Y (METERS)	AIRCRAFT ELEV. (METERS)	BASE HEIGHT (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	SZ
L0002378	0	0.14318E-04	NO	HRDOW	464939.9	3809792.7	1064.1	3.49	6.51	3.25	NO
L0002379	0	0.14318E-04	NO	HRDOW	464925.9	3809792.6	1064.4	3.49	6.51	3.25	NO
L0002380	0	0.14318E-04	NO	HRDOW	464911.9	3809792.6	1064.6	3.49	6.51	3.25	NO
L0002381	0	0.14318E-04	NO	HRDOW	464897.9	3809792.6	1064.8	3.49	6.51	3.25	NO
L0002382	0	0.14318E-04	NO	HRDOW	464883.9	3809792.6	1065.0	3.49	6.51	3.25	NO
L0002383	0	0.14318E-04	NO	HRDOW	464869.9	3809792.6	1065.0	3.49	6.51	3.25	NO
L0002384	0	0.14318E-04	NO	HRDOW	464855.9	3809792.5	1065.1	3.49	6.51	3.25	NO
L0002385	0	0.14318E-04	NO	HRDOW	464841.9	3809792.5	1065.3	3.49	6.51	3.25	NO
L0002386	0	0.14318E-04	NO	HRDOW	464827.9	3809792.5	1065.5	3.49	6.51	3.25	NO
L0002387	0	0.14318E-04	NO	HRDOW	464813.9	3809792.5	1065.7	3.49	6.51	3.25	NO
L0002388	0	0.14318E-04	NO	HRDOW	464799.9	3809792.4	1066.0	3.49	6.51	3.25	NO
L0002389	0	0.14318E-04	NO	HRDOW	464785.9	3809792.4	1066.0	3.49	6.51	3.25	NO
L0002390	0	0.14318E-04	NO	HRDOW	464771.9	3809792.4	1066.0	3.49	6.51	3.25	NO
L0002391	0	0.14318E-04	NO	HRDOW	464757.9	3809792.4	1066.2	3.49	6.51	3.25	NO
L0002392	0	0.14318E-04	NO	HRDOW	464743.9	3809792.4	1066.4	3.49	6.51	3.25	NO
L0002393	0	0.14318E-04	NO	HRDOW	464736.8	3809785.5	1066.7	3.49	6.51	3.25	NO
L0002394	0	0.14318E-04	NO	HRDOW	464736.8	3809771.5	1067.0	3.49	6.51	3.25	NO
L0002395	0	0.14318E-04	NO	HRDOW	464736.8	3809757.5	1067.0	3.49	6.51	3.25	NO
L0002396	0	0.14318E-04	NO	HRDOW	464736.9	3809743.5	1067.0	3.49	6.51	3.25	NO
L0002397	0	0.14318E-04	NO	HRDOW	464736.9	3809729.5	1067.1	3.49	6.51	3.25	NO
L0002398	0	0.14318E-04	NO	HRDOW	464736.9	3809715.5	1067.1	3.49	6.51	3.25	NO
L0002399	0	0.14318E-04	NO	HRDOW	464736.9	3809701.5	1067.5	3.49	6.51	3.25	NO
L0002400	0	0.14318E-04	NO	HRDOW	464736.9	3809687.5	1068.0	3.49	6.51	3.25	NO
L0002401	0	0.14318E-04	NO	HRDOW	464737.0	3809673.5	1068.0	3.49	6.51	3.25	NO
L0002402	0	0.14318E-04	NO	HRDOW	464737.0	3809659.5	1068.0	3.49	6.51		

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      3.25     NO    HRDOW            NO
4702  L0002403         0   0.14318E-04  464737.0 3809645.5  1068.3     3.49     6.51
      3.25     NO    HRDOW            NO
4703  L0002404         0   0.14318E-04  464737.0 3809631.5  1068.8     3.49     6.51
      3.25     NO    HRDOW            NO
4704  L0002405         0   0.14318E-04  464737.0 3809617.5  1069.0     3.49     6.51
      3.25     NO    HRDOW            NO
4705  L0002406         0   0.14318E-04  464737.0 3809603.5  1069.1     3.49     6.51
      3.25     NO    HRDOW            NO
4706  L0002407         0   0.14318E-04  464737.1 3809589.5  1069.3     3.49     6.51
      3.25     NO    HRDOW            NO
4707  L0002408         0   0.14318E-04  464737.1 3809575.5  1069.7     3.49     6.51
      3.25     NO    HRDOW            NO
4708  L0002409         0   0.14318E-04  464737.1 3809561.5  1070.0     3.49     6.51
      3.25     NO    HRDOW            NO
4709  L0002410         0   0.14318E-04  464737.1 3809547.5  1070.0     3.49     6.51
      3.25     NO    HRDOW            NO
4710  L0002411         0   0.14318E-04  464737.5 3809533.9  1070.0     3.49     6.51
      3.25     NO    HRDOW            NO
4711  L0002412         0   0.14318E-04  464751.5 3809534.1  1070.0     3.49     6.51
      3.25     NO    HRDOW            NO
4712  L0002413         0   0.14318E-04  464765.5 3809534.3  1070.0     3.49     6.51
      3.25     NO    HRDOW            NO
4713  L0002414         0   0.14318E-04  464779.5 3809534.5  1070.0     3.49     6.51
      3.25     NO    HRDOW            NO
4714  L0002415         0   0.14318E-04  464793.5 3809534.7  1070.0     3.49     6.51
      3.25     NO    HRDOW            NO
4715  L0002416         0   0.14318E-04  464807.5 3809534.9  1069.8     3.49     6.51
      3.25     NO    HRDOW            NO
4716  L0002417         0   0.14318E-04  464821.5 3809535.2  1069.3     3.49     6.51
      3.25     NO    HRDOW            NO
4717  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
4718   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
4719
                                  PAGE   3
4720   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
4721
4722
4723                                                  *** VOLUME SOURCE DATA ***
4724
4725                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
4726       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
4727         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
             (METERS)             BY
4728   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - -
4729
4730   L0002418         0   0.14318E-04  464835.5 3809535.4  1069.0     3.49     6.51
       3.25     NO    HRDOW            NO
4731   L0002419         0   0.14318E-04  464849.5 3809536.0  1069.0     3.49     6.51
       3.25     NO    HRDOW            NO
4732   L0002420         0   0.14318E-04  464863.5 3809536.7  1069.0     3.49     6.51
       3.25     NO    HRDOW            NO
4733   L0002421         0   0.14318E-04  464877.5 3809537.5  1069.0     3.49     6.51
       3.25     NO    HRDOW            NO
4734   L0002422         0   0.14318E-04  464891.4 3809538.3  1068.9     3.49     6.51
       3.25     NO    HRDOW            NO
4735   L0002423         0   0.14318E-04  464905.4 3809539.0  1068.9     3.49     6.51
       3.25     NO    HRDOW            NO
4736   L0002424         0   0.14318E-04  464919.4 3809539.8  1068.9     3.49     6.51
       3.25     NO    HRDOW            NO
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4737    L0002425          0   0.14318E-04  464933.4 3809540.6  1068.5     3.49     6.51
        3.25     NO    HRDOW            NO
4738    L0002426          0   0.14318E-04  464947.4 3809541.4  1068.1     3.49     6.51
        3.25     NO    HRDOW            NO
4739    L0002427          0   0.14318E-04  464961.4 3809541.8  1068.0     3.49     6.51
        3.25     NO    HRDOW            NO
4740    L0002428          0   0.14318E-04  464975.4 3809541.9  1068.0     3.49     6.51
        3.25     NO    HRDOW            NO
4741    L0002429          0   0.14318E-04  464989.4 3809542.1  1068.0     3.49     6.51
        3.25     NO    HRDOW            NO
4742    L0002430          0   0.14318E-04  465003.3 3809542.2  1068.0     3.49     6.51
        3.25     NO    HRDOW            NO
4743    L0002431          0   0.14318E-04  465017.3 3809542.5  1068.0     3.49     6.51
        3.25     NO    HRDOW            NO
4744    L0002432          0   0.14318E-04  465031.3 3809542.8  1068.0     3.49     6.51
        3.25     NO    HRDOW            NO
4745    L0002433          0   0.14318E-04  465045.3 3809543.1  1068.0     3.49     6.51
        3.25     NO    HRDOW            NO
4746    L0002434          0   0.14318E-04  465059.3 3809543.4  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4747    L0002435          0   0.14318E-04  465073.3 3809543.4  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4748    L0002436          0   0.14318E-04  465087.3 3809543.0  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4749    L0002437          0   0.14318E-04  465101.3 3809542.6  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4750    L0002438          0   0.14318E-04  465115.3 3809542.2  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4751    L0002439          0   0.14318E-04  465129.3 3809541.8  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4752    L0002440          0   0.14318E-04  465143.3 3809541.4  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4753    L0002441          0   0.14318E-04  465157.3 3809540.6  1067.8     3.49     6.51
        3.25     NO    HRDOW            NO
4754    L0002442          0   0.14318E-04  465171.3 3809539.8  1067.5     3.49     6.51
        3.25     NO    HRDOW            NO
4755    L0002443          0   0.14318E-04  465185.2 3809539.0  1067.1     3.49     6.51
        3.25     NO    HRDOW            NO
4756    VOL1              0   0.64259E-03  465065.4 3810685.3  1052.7     5.00    21.84
        1.40     NO    HRDOW            NO
4757    VOL2              0   0.64259E-03  465159.2 3810684.7  1051.7     5.00    21.84
        1.40     NO    HRDOW            NO
4758    VOL3              0   0.64259E-03  465253.6 3810684.4  1050.0     5.00    21.84
        1.40     NO    HRDOW            NO
4759    VOL4              0   0.64259E-03  465347.9 3810684.4  1048.5     5.00    21.84
        1.40     NO    HRDOW            NO
4760    VOL5              0   0.64259E-03  465441.9 3810684.7  1047.4     5.00    21.84
        1.40     NO    HRDOW            NO
4761    VOL6              0   0.64259E-03  465535.5 3810685.4  1046.0     5.00    21.84
        1.40     NO    HRDOW            NO
4762    VOL7              0   0.64259E-03  465629.5 3810685.4  1044.8     5.00    21.84
        1.40     NO    HRDOW            NO
4763    VOL8              0   0.64259E-03  465680.0 3810685.4  1044.5     5.00    21.84
        1.40     NO    HRDOW            NO
4764    VOL9              0   0.64259E-03  465610.8 3810631.8  1046.0     5.00    21.84
        1.40     NO    HRDOW            NO
4765    VOL10             0   0.64259E-03  465516.5 3810591.4  1047.8     5.00    21.84
        1.40     NO    HRDOW            NO
4766    VOL11             0   0.64259E-03  465422.5 3810591.4  1048.9     5.00    21.84
        1.40     NO    HRDOW            NO
4767    VOL12             0   0.64259E-03  465328.9 3810591.1  1050.0     5.00    21.84
        1.40     NO    HRDOW            NO
4768    VOL13             0   0.64259E-03  465234.9 3810590.4  1051.4     5.00    21.84
        1.40     NO    HRDOW            NO
4769    VOL14             0   0.64259E-03  465140.6 3810591.4  1052.6     5.00    21.84
        1.40     NO    HRDOW            NO
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER INIT. PART. SOURCE CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	URBAN	EMISSION RATE X (METERS)	Y (METERS)	AIRCRAFT ELEV. (METERS)	BASE HEIGHT (METERS)	RELEASE (METERS)	INIT. SY (METERS)	SZ
VOL15	0	0.64259E-03		465046.6	3810591.4	1054.0	5.00	21.84	1.40	NO
VOL16	0	0.64259E-03		464963.1	3810591.4	1055.0	5.00	21.84	1.40	NO
L0002444	0	0.40910E-05		464952.4	3809792.3	1064.0	3.49	4.00	3.25	NO
L0002445	0	0.40910E-05		464961.0	3809792.2	1064.0	3.49	4.00	3.25	NO
L0002446	0	0.40910E-05		464969.6	3809792.1	1064.0	3.49	4.00	3.25	NO
L0002447	0	0.40910E-05		464978.2	3809792.0	1064.0	3.49	4.00	3.25	NO
L0002448	0	0.40910E-05		464986.7	3809791.9	1064.0	3.49	4.00	3.25	NO
L0002449	0	0.40910E-05		464995.3	3809791.7	1064.0	3.49	4.00	3.25	NO
L0002450	0	0.40910E-05		465003.9	3809791.6	1064.0	3.49	4.00	3.25	NO
L0002451	0	0.40910E-05		465012.5	3809791.5	1064.0	3.49	4.00	3.25	NO
L0002452	0	0.40910E-05		465021.1	3809791.4	1063.8	3.49	4.00	3.25	NO
L0002453	0	0.40910E-05		465029.7	3809791.3	1063.7	3.49	4.00	3.25	NO
L0002454	0	0.40910E-05		465038.3	3809791.1	1063.5	3.49	4.00	3.25	NO
L0002455	0	0.40910E-05		465046.9	3809791.0	1063.5	3.49	4.00	3.25	NO
L0002456	0	0.40910E-05		465055.5	3809790.9	1063.5	3.49	4.00	3.25	NO
L0002457	0	0.40910E-05		465064.0	3809790.9	1063.5	3.49	4.00	3.25	NO
L0002458	0	0.40910E-05		465072.6	3809791.2	1063.5	3.49	4.00	3.25	NO
L0002459	0	0.40910E-05		465081.2	3809791.4	1063.5	3.49	4.00	3.25	NO
L0002460	0	0.40910E-05		465089.8	3809791.9	1063.5	3.49	4.00	3.25	NO
L0002461	0	0.40910E-05		465098.3	3809793.2	1063.4	3.49	4.00	3.25	NO
L0002462	0	0.40910E-05		465106.8	3809794.6	1063.3	3.49	4.00	3.25	NO
L0002463	0	0.40910E-05		465115.1	3809796.6	1063.1	3.49	4.00	3.25	NO
L0002464	0	0.40910E-05		465123.5	3809798.5	1063.0	3.49	4.00		

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      3.25     NO    HRDOW            NO
4806  L0002465         0   0.40910E-05  465131.4 3809801.7  1063.0     3.49     4.00
      3.25     NO    HRDOW            NO
4807  L0002466         0   0.40910E-05  465139.4 3809805.0  1062.7     3.49     4.00
      3.25     NO    HRDOW            NO
4808  L0002467         0   0.40910E-05  465147.3 3809808.3  1062.4     3.49     4.00
      3.25     NO    HRDOW            NO
4809  L0002468         0   0.40910E-05  465155.1 3809811.9  1062.1     3.49     4.00
      3.25     NO    HRDOW            NO
4810  L0002469         0   0.40910E-05  465162.5 3809816.2  1062.0     3.49     4.00
      3.25     NO    HRDOW            NO
4811  L0002470         0   0.40910E-05  465170.0 3809820.5  1062.0     3.49     4.00
      3.25     NO    HRDOW            NO
4812  L0002471         0   0.40910E-05  465177.0 3809825.4  1062.0     3.49     4.00
      3.25     NO    HRDOW            NO
4813  L0002472         0   0.40910E-05  465183.4 3809831.1  1062.0     3.49     4.00
      3.25     NO    HRDOW            NO
4814  L0002473         0   0.40910E-05  465189.8 3809836.9  1062.0     3.49     4.00
      3.25     NO    HRDOW            NO
4815  L0002474         0   0.40910E-05  465196.2 3809842.6  1061.8     3.49     4.00
      3.25     NO    HRDOW            NO
4816  L0002475         0   0.40910E-05  465201.9 3809849.0  1061.6     3.49     4.00
      3.25     NO    HRDOW            NO
4817  L0002476         0   0.40910E-05  465207.4 3809855.6  1061.3     3.49     4.00
      3.25     NO    HRDOW            NO
4818  L0002477         0   0.40910E-05  465212.9 3809862.2  1061.1     3.49     4.00
      3.25     NO    HRDOW            NO
4819  L0002478         0   0.40910E-05  465218.3 3809868.8  1060.9     3.49     4.00
      3.25     NO    HRDOW            NO
4820  L0002479         0   0.40910E-05  465223.7 3809875.5  1060.7     3.49     4.00
      3.25     NO    HRDOW            NO
4821  L0002480         0   0.40910E-05  465228.8 3809882.5  1060.6     3.49     4.00
      3.25     NO    HRDOW            NO
4822  L0002481         0   0.40910E-05  465233.8 3809889.4  1060.6     3.49     4.00
      3.25     NO    HRDOW            NO
4823  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
4824   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
4825
                                  PAGE   5
4826   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
4827
4828
4829                                                  *** VOLUME SOURCE DATA ***
4830
4831                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
4832       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
4833         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
             (METERS)              BY
4834   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - -
4835
4836   L0002482         0   0.40910E-05  465238.8 3809896.4  1060.6     3.49     4.00
       3.25     NO    HRDOW            NO
4837   L0002483         0   0.40910E-05  465243.9 3809903.3  1060.6     3.49     4.00
       3.25     NO    HRDOW            NO
4838   L0002484         0   0.40910E-05  465248.9 3809910.3  1060.5     3.49     4.00
       3.25     NO    HRDOW            NO
4839   L0002485         0   0.40910E-05  465254.0 3809917.2  1060.2     3.49     4.00
       3.25     NO    HRDOW            NO
4840   L0002486         0   0.40910E-05  465259.0 3809924.2  1060.0     3.49     4.00
       3.25     NO    HRDOW            NO
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4841    L0002487          0   0.40910E-05  465264.0 3809931.2  1059.9     3.49     4.00
        3.25     NO    HRDOW            NO
4842    L0002488          0   0.40910E-05  465268.8 3809938.3  1059.7     3.49     4.00
        3.25     NO    HRDOW            NO
4843    L0002489          0   0.40910E-05  465273.5 3809945.5  1059.5     3.49     4.00
        3.25     NO    HRDOW            NO
4844    L0002490          0   0.40910E-05  465278.3 3809952.6  1059.2     3.49     4.00
        3.25     NO    HRDOW            NO
4845    L0002491          0   0.40910E-05  465283.1 3809959.7  1059.0     3.49     4.00
        3.25     NO    HRDOW            NO
4846    L0002492          0   0.40910E-05  465287.9 3809966.9  1058.9     3.49     4.00
        3.25     NO    HRDOW            NO
4847    L0002493          0   0.40910E-05  465292.6 3809974.0  1058.8     3.49     4.00
        3.25     NO    HRDOW            NO
4848    L0002494          0   0.40910E-05  465297.4 3809981.2  1058.5     3.49     4.00
        3.25     NO    HRDOW            NO
4849    L0002495          0   0.40910E-05  465302.2 3809988.3  1058.2     3.49     4.00
        3.25     NO    HRDOW            NO
4850    L0002496          0   0.40910E-05  465306.9 3809995.5  1058.1     3.49     4.00
        3.25     NO    HRDOW            NO
4851    L0002497          0   0.40910E-05  465311.7 3810002.6  1058.0     3.49     4.00
        3.25     NO    HRDOW            NO
4852    L0002498          0   0.40910E-05  465316.5 3810009.7  1058.0     3.49     4.00
        3.25     NO    HRDOW            NO
4853    L0002499          0   0.40910E-05  465321.3 3810016.9  1058.0     3.49     4.00
        3.25     NO    HRDOW            NO
4854    L0002500          0   0.40910E-05  465326.0 3810024.0  1057.9     3.49     4.00
        3.25     NO    HRDOW            NO
4855    L0002501          0   0.40910E-05  465330.7 3810031.2  1057.6     3.49     4.00
        3.25     NO    HRDOW            NO
4856    L0002502          0   0.40910E-05  465335.4 3810038.4  1057.4     3.49     4.00
        3.25     NO    HRDOW            NO
4857    L0002503          0   0.40910E-05  465340.1 3810045.6  1057.0     3.49     4.00
        3.25     NO    HRDOW            NO
4858    L0002504          0   0.40910E-05  465344.8 3810052.8  1057.0     3.49     4.00
        3.25     NO    HRDOW            NO
4859    L0002505          0   0.40910E-05  465349.5 3810060.0  1057.0     3.49     4.00
        3.25     NO    HRDOW            NO
4860    L0002506          0   0.40910E-05  465354.2 3810067.2  1057.0     3.49     4.00
        3.25     NO    HRDOW            NO
4861    L0002507          0   0.40910E-05  465358.9 3810074.4  1057.0     3.49     4.00
        3.25     NO    HRDOW            NO
4862    L0002508          0   0.40910E-05  465363.5 3810081.6  1056.8     3.49     4.00
        3.25     NO    HRDOW            NO
4863    L0002509          0   0.40910E-05  465368.2 3810088.8  1056.6     3.49     4.00
        3.25     NO    HRDOW            NO
4864    L0002510          0   0.40910E-05  465372.9 3810096.0  1056.3     3.49     4.00
        3.25     NO    HRDOW            NO
4865    L0002511          0   0.40910E-05  465377.6 3810103.2  1056.1     3.49     4.00
        3.25     NO    HRDOW            NO
4866    L0002512          0   0.40910E-05  465382.3 3810110.4  1056.0     3.49     4.00
        3.25     NO    HRDOW            NO
4867    L0002513          0   0.40910E-05  465387.0 3810117.6  1056.0     3.49     4.00
        3.25     NO    HRDOW            NO
4868    L0002514          0   0.40910E-05  465391.7 3810124.8  1056.0     3.49     4.00
        3.25     NO    HRDOW            NO
4869    L0002515          0   0.40910E-05  465396.4 3810132.0  1056.0     3.49     4.00
        3.25     NO    HRDOW            NO
4870    L0002516          0   0.40910E-05  465401.1 3810139.2  1055.9     3.49     4.00
        3.25     NO    HRDOW            NO
4871    L0002517          0   0.40910E-05  465405.8 3810146.4  1055.5     3.49     4.00
        3.25     NO    HRDOW            NO
4872    L0002518          0   0.40910E-05  465410.5 3810153.6  1055.3     3.49     4.00
        3.25     NO    HRDOW            NO
4873    L0002519          0   0.40910E-05  465415.1 3810160.8  1055.1     3.49     4.00
        3.25     NO    HRDOW            NO
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4874   L0002520         0   0.40910E-05  465419.8 3810168.0  1054.9     3.49     4.00
       3.25     NO    HRDOW            NO
4875   L0002521         0   0.40910E-05  465424.5 3810175.2  1054.7     3.49     4.00
       3.25     NO    HRDOW            NO
4876   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
4877   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
4878
                                  PAGE   6
4879   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
4880
4881
4882                                                      *** VOLUME SOURCE DATA ***
4883
4884                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
4885     SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
         SZ     SOURCE  SCALAR VARY
4886       ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
           (METERS)             BY
4887   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - -
4888
4889   L0002522         0   0.40910E-05  465429.2 3810182.4  1054.5     3.49     4.00
       3.25     NO    HRDOW            NO
4890   L0002523         0   0.40910E-05  465433.8 3810189.6  1054.2     3.49     4.00
       3.25     NO    HRDOW            NO
4891   L0002524         0   0.40910E-05  465438.5 3810196.8  1054.0     3.49     4.00
       3.25     NO    HRDOW            NO
4892   L0002525         0   0.40910E-05  465443.2 3810204.0  1054.0     3.49     4.00
       3.25     NO    HRDOW            NO
4893   L0002526         0   0.40910E-05  465447.9 3810211.2  1054.0     3.49     4.00
       3.25     NO    HRDOW            NO
4894   L0002527         0   0.40910E-05  465452.5 3810218.4  1054.0     3.49     4.00
       3.25     NO    HRDOW            NO
4895   L0002528         0   0.40910E-05  465457.2 3810225.6  1054.0     3.49     4.00
       3.25     NO    HRDOW            NO
4896   L0002529         0   0.40910E-05  465461.9 3810232.8  1053.8     3.49     4.00
       3.25     NO    HRDOW            NO
4897   L0002530         0   0.40910E-05  465466.6 3810240.0  1053.5     3.49     4.00
       3.25     NO    HRDOW            NO
4898   L0002531         0   0.40910E-05  465471.2 3810247.2  1053.3     3.49     4.00
       3.25     NO    HRDOW            NO
4899   L0002532         0   0.40910E-05  465475.9 3810254.5  1053.1     3.49     4.00
       3.25     NO    HRDOW            NO
4900   L0002533         0   0.40910E-05  465480.6 3810261.7  1053.0     3.49     4.00
       3.25     NO    HRDOW            NO
4901   L0002534         0   0.40910E-05  465485.3 3810268.9  1053.0     3.49     4.00
       3.25     NO    HRDOW            NO
4902   L0002535         0   0.40910E-05  465489.9 3810276.1  1053.0     3.49     4.00
       3.25     NO    HRDOW            NO
4903   L0002536         0   0.40910E-05  465494.6 3810283.3  1052.9     3.49     4.00
       3.25     NO    HRDOW            NO
4904   L0002537         0   0.40910E-05  465499.3 3810290.5  1052.6     3.49     4.00
       3.25     NO    HRDOW            NO
4905   L0002538         0   0.40910E-05  465504.0 3810297.7  1052.3     3.49     4.00
       3.25     NO    HRDOW            NO
4906   L0002539         0   0.40910E-05  465508.6 3810304.9  1052.1     3.49     4.00
       3.25     NO    HRDOW            NO
4907   L0002540         0   0.40910E-05  465513.3 3810312.1  1052.0     3.49     4.00
       3.25     NO    HRDOW            NO
4908   L0002541         0   0.40910E-05  465518.0 3810319.3  1052.0     3.49     4.00
       3.25     NO    HRDOW            NO
4909   L0002542         0   0.40910E-05  465522.6 3810326.6  1052.0     3.49     4.00
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      3.25     NO    HRDOW            NO
4910  L0002543         0   0.40910E-05  465527.2 3810333.8  1051.9     3.49     4.00
      3.25     NO    HRDOW            NO
4911  L0002544         0   0.40910E-05  465531.8 3810341.1  1051.7     3.49     4.00
      3.25     NO    HRDOW            NO
4912  L0002545         0   0.40910E-05  465536.4 3810348.3  1051.4     3.49     4.00
      3.25     NO    HRDOW            NO
4913  L0002546         0   0.40910E-05  465541.0 3810355.6  1051.0     3.49     4.00
      3.25     NO    HRDOW            NO
4914  L0002547         0   0.40910E-05  465545.6 3810362.8  1050.6     3.49     4.00
      3.25     NO    HRDOW            NO
4915  L0002548         0   0.40910E-05  465550.2 3810370.1  1050.2     3.49     4.00
      3.25     NO    HRDOW            NO
4916  L0002549         0   0.40910E-05  465554.8 3810377.3  1050.0     3.49     4.00
      3.25     NO    HRDOW            NO
4917  L0002550         0   0.40910E-05  465559.5 3810384.6  1049.9     3.49     4.00
      3.25     NO    HRDOW            NO
4918  L0002551         0   0.40910E-05  465564.1 3810391.8  1049.8     3.49     4.00
      3.25     NO    HRDOW            NO
4919  L0002552         0   0.40910E-05  465568.7 3810399.1  1049.5     3.49     4.00
      3.25     NO    HRDOW            NO
4920  L0002553         0   0.40910E-05  465573.3 3810406.3  1049.2     3.49     4.00
      3.25     NO    HRDOW            NO
4921  L0002554         0   0.40910E-05  465577.9 3810413.6  1048.8     3.49     4.00
      3.25     NO    HRDOW            NO
4922  L0002555         0   0.40910E-05  465582.5 3810420.8  1048.5     3.49     4.00
      3.25     NO    HRDOW            NO
4923  L0002556         0   0.40910E-05  465587.1 3810428.1  1048.2     3.49     4.00
      3.25     NO    HRDOW            NO
4924  L0002557         0   0.40910E-05  465591.7 3810435.3  1048.0     3.49     4.00
      3.25     NO    HRDOW            NO
4925  L0002558         0   0.40910E-05  465596.3 3810442.6  1048.1     3.49     4.00
      3.25     NO    HRDOW            NO
4926  L0002559         0   0.40910E-05  465600.9 3810449.8  1048.1     3.49     4.00
      3.25     NO    HRDOW            NO
4927  L0002560         0   0.40910E-05  465605.6 3810457.0  1048.1     3.49     4.00
      3.25     NO    HRDOW            NO
4928  L0002561         0   0.40910E-05  465610.4 3810464.1  1048.0     3.49     4.00
      3.25     NO    HRDOW            NO
4929  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
4930   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
4931
                                  PAGE   7
4932   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
4933
4934
4935                                                  *** VOLUME SOURCE DATA ***
4936
4937                 NUMBER EMISSION RATE                    BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
4938       SOURCE     PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
4939         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
           (METERS)             BY
4940   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - -
4941
4942   L0002562         0   0.40910E-05  465615.2 3810471.3  1048.0     3.49     4.00
       3.25     NO    HRDOW            NO
4943   L0002563         0   0.40910E-05  465620.0 3810478.4  1048.0     3.49     4.00
       3.25     NO    HRDOW            NO
4944   L0002564         0   0.40910E-05  465624.8 3810485.5  1048.0     3.49     4.00
       3.25     NO    HRDOW            NO
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4945    L0002565          0   0.40910E-05  465629.6 3810492.6  1048.0     3.49     4.00
        3.25     NO    HRDOW            NO
4946    L0002566          0   0.40910E-05  465634.4 3810499.8  1048.0     3.49     4.00
        3.25     NO    HRDOW            NO
4947    L0002567          0   0.40910E-05  465639.2 3810506.9  1048.0     3.49     4.00
        3.25     NO    HRDOW            NO
4948    L0002568          0   0.40910E-05  465644.0 3810514.0  1047.9     3.49     4.00
        3.25     NO    HRDOW            NO
4949    L0002569          0   0.40910E-05  465648.8 3810521.1  1047.8     3.49     4.00
        3.25     NO    HRDOW            NO
4950    L0002570          0   0.40910E-05  465653.6 3810528.3  1047.5     3.49     4.00
        3.25     NO    HRDOW            NO
4951    L0002571          0   0.40910E-05  465658.4 3810535.4  1047.3     3.49     4.00
        3.25     NO    HRDOW            NO
4952    L0002572          0   0.40910E-05  465663.1 3810542.5  1047.1     3.49     4.00
        3.25     NO    HRDOW            NO
4953    L0002573          0   0.40910E-05  465667.9 3810549.7  1047.0     3.49     4.00
        3.25     NO    HRDOW            NO
4954    L0002574          0   0.40910E-05  465672.7 3810556.8  1047.0     3.49     4.00
        3.25     NO    HRDOW            NO
4955    L0002575          0   0.40910E-05  465677.5 3810563.9  1046.7     3.49     4.00
        3.25     NO    HRDOW            NO
4956    L0002576          0   0.40910E-05  465682.3 3810571.0  1046.5     3.49     4.00
        3.25     NO    HRDOW            NO
4957    L0002577          0   0.40910E-05  465687.1 3810578.2  1046.3     3.49     4.00
        3.25     NO    HRDOW            NO
4958    L0002578          0   0.40910E-05  465691.8 3810585.4  1046.0     3.49     4.00
        3.25     NO    HRDOW            NO
4959    L0002579          0   0.40910E-05  465696.3 3810592.7  1046.0     3.49     4.00
        3.25     NO    HRDOW            NO
4960    L0002580          0   0.40910E-05  465700.9 3810599.9  1046.0     3.49     4.00
        3.25     NO    HRDOW            NO
4961    L0002581          0   0.40910E-05  465705.5 3810607.2  1045.9     3.49     4.00
        3.25     NO    HRDOW            NO
4962    L0002582          0   0.40910E-05  465710.1 3810614.5  1045.7     3.49     4.00
        3.25     NO    HRDOW            NO
4963    L0002583          0   0.40910E-05  465711.1 3810620.6  1045.5     3.49     4.00
        3.25     NO    HRDOW            NO
4964    L0002584          0   0.40910E-05  465703.1 3810623.8  1045.7     3.49     4.00
        3.25     NO    HRDOW            NO
4965    L0002585          0   0.40910E-05  465695.1 3810627.0  1045.6     3.49     4.00
        3.25     NO    HRDOW            NO
4966    L0002586          0   0.40910E-05  465687.5 3810624.7  1045.7     3.49     4.00
        3.25     NO    HRDOW            NO
4967    L0002587          0   0.40910E-05  465680.0 3810620.5  1045.9     3.49     4.00
        3.25     NO    HRDOW            NO
4968    L0002588          0   0.40910E-05  465672.7 3810616.1  1046.0     3.49     4.00
        3.25     NO    HRDOW            NO
4969    L0002589          0   0.40910E-05  465665.4 3810611.6  1046.0     3.49     4.00
        3.25     NO    HRDOW            NO
4970    L0002590          0   0.40910E-05  465658.0 3810607.1  1046.1     3.49     4.00
        3.25     NO    HRDOW            NO
4971    L0002591          0   0.40910E-05  465650.7 3810602.7  1046.3     3.49     4.00
        3.25     NO    HRDOW            NO
4972    L0002592          0   0.40910E-05  465643.3 3810598.2  1046.5     3.49     4.00
        3.25     NO    HRDOW            NO
4973    L0002593          0   0.40910E-05  465636.0 3810593.7  1046.8     3.49     4.00
        3.25     NO    HRDOW            NO
4974    L0002594          0   0.40910E-05  465628.7 3810589.2  1046.9     3.49     4.00
        3.25     NO    HRDOW            NO
4975    L0002595          0   0.40910E-05  465621.3 3810584.8  1047.0     3.49     4.00
        3.25     NO    HRDOW            NO
4976    L0002596          0   0.40910E-05  465614.0 3810580.3  1047.2     3.49     4.00
        3.25     NO    HRDOW            NO
4977    L0002597          0   0.40910E-05  465606.7 3810575.8  1047.3     3.49     4.00
        3.25     NO    HRDOW            NO
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4978   L0002598         0   0.40910E-05  465599.3 3810571.4  1047.5     3.49     4.00
       3.25     NO    HRDOW            NO
4979   L0002599         0   0.40910E-05  465591.3 3810568.3  1047.6     3.49     4.00
       3.25     NO    HRDOW            NO
4980   L0002600         0   0.40910E-05  465583.2 3810565.6  1047.7     3.49     4.00
       3.25     NO    HRDOW            NO
4981   L0002601         0   0.40910E-05  465575.0 3810563.0  1047.8     3.49     4.00
       3.25     NO    HRDOW            NO
4982   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
4983    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
4984
                                    PAGE   8
4985   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
4986
4987
4988                                                    *** VOLUME SOURCE DATA ***
4989
4990                  NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                      INIT.   URBAN  EMISSION RATE   AIRCRAFT
4991     SOURCE        PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
         SZ     SOURCE  SCALAR VARY
4992       ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
           (METERS)             BY
4993   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - -
4994
4995   L0002602         0   0.40910E-05  465566.9 3810560.3  1047.9     3.49     4.00
       3.25     NO    HRDOW            NO
4996   L0002603         0   0.40910E-05  465558.7 3810557.6  1048.0     3.49     4.00
       3.25     NO    HRDOW            NO
4997   L0002604         0   0.40910E-05  465550.5 3810554.9  1048.0     3.49     4.00
       3.25     NO    HRDOW            NO
4998   L0002605         0   0.40910E-05  465542.4 3810552.2  1048.1     3.49     4.00
       3.25     NO    HRDOW            NO
4999   L0002606         0   0.40910E-05  465534.2 3810549.5  1048.2     3.49     4.00
       3.25     NO    HRDOW            NO
5000   L0002607         0   0.40910E-05  465526.1 3810546.8  1048.3     3.49     4.00
       3.25     NO    HRDOW            NO
5001   L0002608         0   0.40910E-05  465517.6 3810545.4  1048.4     3.49     4.00
       3.25     NO    HRDOW            NO
5002   L0002609         0   0.40910E-05  465509.1 3810544.5  1048.4     3.49     4.00
       3.25     NO    HRDOW            NO
5003   L0002610         0   0.40910E-05  465500.6 3810543.7  1048.4     3.49     4.00
       3.25     NO    HRDOW            NO
5004   L0002611         0   0.40910E-05  465492.0 3810542.7  1048.5     3.49     4.00
       3.25     NO    HRDOW            NO
5005   L0002612         0   0.40910E-05  465483.5 3810541.7  1048.5     3.49     4.00
       3.25     NO    HRDOW            NO
5006   L0002613         0   0.40910E-05  465475.0 3810540.7  1048.5     3.49     4.00
       3.25     NO    HRDOW            NO
5007   L0002614         0   0.40910E-05  465466.4 3810539.7  1049.0     3.49     4.00
       3.25     NO    HRDOW            NO
5008   L0002615         0   0.40910E-05  465457.8 3810539.7  1049.0     3.49     4.00
       3.25     NO    HRDOW            NO
5009   L0002616         0   0.40910E-05  465449.2 3810539.6  1049.2     3.49     4.00
       3.25     NO    HRDOW            NO
5010   L0002617         0   0.40910E-05  465440.6 3810539.6  1049.3     3.49     4.00
       3.25     NO    HRDOW            NO
5011   L0002618         0   0.40910E-05  465432.1 3810539.6  1049.5     3.49     4.00
       3.25     NO    HRDOW            NO
5012   L0002619         0   0.40910E-05  465423.5 3810539.5  1049.6     3.49     4.00
       3.25     NO    HRDOW            NO
5013   L0002620         0   0.40910E-05  465414.9 3810539.5  1049.8     3.49     4.00
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      3.25     NO    HRDOW            NO
5014  L0002621         0   0.40910E-05  465406.3 3810539.4  1049.9     3.49     4.00
      3.25     NO    HRDOW            NO
5015  L0002622         0   0.40910E-05  465397.7 3810539.4  1050.0     3.49     4.00
      3.25     NO    HRDOW            NO
5016  L0002623         0   0.40910E-05  465389.1 3810539.4  1050.2     3.49     4.00
      3.25     NO    HRDOW            NO
5017  L0002624         0   0.40910E-05  465380.5 3810539.3  1050.4     3.49     4.00
      3.25     NO    HRDOW            NO
5018  L0002625         0   0.40910E-05  465371.9 3810539.3  1050.5     3.49     4.00
      3.25     NO    HRDOW            NO
5019  L0002626         0   0.40910E-05  465363.3 3810539.2  1050.6     3.49     4.00
      3.25     NO    HRDOW            NO
5020  L0002627         0   0.40910E-05  465354.8 3810539.2  1050.6     3.49     4.00
      3.25     NO    HRDOW            NO
5021  L0002628         0   0.40910E-05  465346.2 3810539.1  1050.6     3.49     4.00
      3.25     NO    HRDOW            NO
5022  L0002629         0   0.40910E-05  465337.6 3810539.1  1050.6     3.49     4.00
      3.25     NO    HRDOW            NO
5023  L0002630         0   0.40910E-05  465329.0 3810539.1  1050.7     3.49     4.00
      3.25     NO    HRDOW            NO
5024  L0002631         0   0.40910E-05  465320.4 3810539.0  1050.8     3.49     4.00
      3.25     NO    HRDOW            NO
5025  L0002632         0   0.40910E-05  465311.8 3810539.0  1051.0     3.49     4.00
      3.25     NO    HRDOW            NO
5026  L0002633         0   0.40910E-05  465303.2 3810538.9  1051.1     3.49     4.00
      3.25     NO    HRDOW            NO
5027  L0002634         0   0.40910E-05  465294.6 3810538.9  1051.3     3.49     4.00
      3.25     NO    HRDOW            NO
5028  L0002635         0   0.40910E-05  465286.0 3810538.9  1051.5     3.49     4.00
      3.25     NO    HRDOW            NO
5029  L0002636         0   0.40910E-05  465277.4 3810538.8  1051.6     3.49     4.00
      3.25     NO    HRDOW            NO
5030  L0002637         0   0.40910E-05  465268.9 3810538.8  1051.7     3.49     4.00
      3.25     NO    HRDOW            NO
5031  L0002638         0   0.40910E-05  465260.3 3810538.7  1051.8     3.49     4.00
      3.25     NO    HRDOW            NO
5032  L0002639         0   0.40910E-05  465251.7 3810538.7  1052.0     3.49     4.00
      3.25     NO    HRDOW            NO
5033  L0002640         0   0.40910E-05  465243.1 3810538.6  1052.0     3.49     4.00
      3.25     NO    HRDOW            NO
5034  L0002641         0   0.40910E-05  465234.5 3810538.6  1052.0     3.49     4.00
      3.25     NO    HRDOW            NO
5035  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
5036   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
5037
                                  PAGE   9
5038   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5039
5040
5041                                                  *** VOLUME SOURCE DATA ***
5042
5043                NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                    INIT.   URBAN  EMISSION RATE   AIRCRAFT
5044      SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
          SZ     SOURCE  SCALAR VARY
5045        ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
            (METERS)             BY
5046   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - -
5047
5048   L0002642         0   0.40910E-05  465225.9 3810538.6  1052.0     3.49     4.00
       3.25     NO    HRDOW            NO
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5049    L0002643         0   0.40910E-05  465217.3 3810538.5  1052.0     3.49     4.00
        3.25     NO    HRDOW            NO
5050    L0002644         0   0.40910E-05  465208.7 3810538.5  1052.0     3.49     4.00
        3.25     NO    HRDOW            NO
5051    L0002645         0   0.40910E-05  465200.1 3810538.4  1052.0     3.49     4.00
        3.25     NO    HRDOW            NO
5052    L0002646         0   0.40910E-05  465191.5 3810538.4  1052.0     3.49     4.00
        3.25     NO    HRDOW            NO
5053    L0002647         0   0.40910E-05  465183.0 3810538.4  1052.2     3.49     4.00
        3.25     NO    HRDOW            NO
5054    L0002648         0   0.40910E-05  465174.4 3810538.3  1052.5     3.49     4.00
        3.25     NO    HRDOW            NO
5055    L0002649         0   0.40910E-05  465165.8 3810538.3  1052.8     3.49     4.00
        3.25     NO    HRDOW            NO
5056    L0002650         0   0.40910E-05  465157.2 3810538.2  1053.0     3.49     4.00
        3.25     NO    HRDOW            NO
5057    L0002651         0   0.40910E-05  465148.6 3810538.2  1053.0     3.49     4.00
        3.25     NO    HRDOW            NO
5058    L0002652         0   0.40910E-05  465140.0 3810538.2  1053.0     3.49     4.00
        3.25     NO    HRDOW            NO
5059    L0002653         0   0.40910E-05  465131.4 3810538.2  1053.0     3.49     4.00
        3.25     NO    HRDOW            NO
5060    L0002654         0   0.40910E-05  465122.8 3810538.2  1053.2     3.49     4.00
        3.25     NO    HRDOW            NO
5061    L0002655         0   0.40910E-05  465114.2 3810538.2  1053.5     3.49     4.00
        3.25     NO    HRDOW            NO
5062    L0002656         0   0.40910E-05  465105.6 3810538.2  1053.8     3.49     4.00
        3.25     NO    HRDOW            NO
5063    L0002657         0   0.40910E-05  465097.1 3810538.2  1054.0     3.49     4.00
        3.25     NO    HRDOW            NO
5064    L0002658         0   0.40910E-05  465088.5 3810538.2  1054.0     3.49     4.00
        3.25     NO    HRDOW            NO
5065    L0002659         0   0.40910E-05  465079.9 3810538.2  1054.0     3.49     4.00
        3.25     NO    HRDOW            NO
5066    L0002660         0   0.40910E-05  465071.3 3810538.2  1054.0     3.49     4.00
        3.25     NO    HRDOW            NO
5067    L0002661         0   0.40910E-05  465062.7 3810538.2  1054.0     3.49     4.00
        3.25     NO    HRDOW            NO
5068    L0002662         0   0.40910E-05  465054.1 3810538.2  1054.0     3.49     4.00
        3.25     NO    HRDOW            NO
5069    L0002663         0   0.40910E-05  465045.5 3810538.2  1054.0     3.49     4.00
        3.25     NO    HRDOW            NO
5070    L0002664         0   0.40910E-05  465036.9 3810538.2  1054.1     3.49     4.00
        3.25     NO    HRDOW            NO
5071    L0002665         0   0.40910E-05  465028.3 3810537.8  1054.4     3.49     4.00
        3.25     NO    HRDOW            NO
5072    L0002666         0   0.40910E-05  465019.8 3810537.3  1054.7     3.49     4.00
        3.25     NO    HRDOW            NO
5073    L0002667         0   0.40910E-05  465011.2 3810536.8  1055.0     3.49     4.00
        3.25     NO    HRDOW            NO
5074    L0002668         0   0.40910E-05  465002.6 3810536.3  1055.2     3.49     4.00
        3.25     NO    HRDOW            NO
5075    L0002669         0   0.40910E-05  464994.0 3810535.8  1055.4     3.49     4.00
        3.25     NO    HRDOW            NO
5076    L0002670         0   0.40910E-05  464985.5 3810535.4  1055.6     3.49     4.00
        3.25     NO    HRDOW            NO
5077    L0002671         0   0.40910E-05  464976.9 3810534.9  1055.7     3.49     4.00
        3.25     NO    HRDOW            NO
5078    L0002672         0   0.40910E-05  464968.4 3810533.8  1055.8     3.49     4.00
        3.25     NO    HRDOW            NO
5079    L0002673         0   0.40910E-05  464960.0 3810532.2  1055.9     3.49     4.00
        3.25     NO    HRDOW            NO
5080    L0002674         0   0.40910E-05  464951.5 3810530.5  1056.0     3.49     4.00
        3.25     NO    HRDOW            NO
5081    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
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5082    *** AERMET - VERSION  19191 ***
        ***                                                              ***
        17:45:50
5083
                                  PAGE  10
5084    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5085
5086
5087                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***
5088
5089    SRCGROUP ID                                          SOURCE IDs
5090    -----------                                          ----------
5091
5092
5093     ALL        L0002378    , L0002379    , L0002380    , L0002381    , L0002382    ,
        L0002383    , L0002384    , L0002385    ,
5094
5095                L0002386    , L0002387    , L0002388    , L0002389    , L0002390    ,
                   L0002391    , L0002392    , L0002393    ,
5096
5097                L0002394    , L0002395    , L0002396    , L0002397    , L0002398    ,
                   L0002399    , L0002400    , L0002401    ,
5098
5099                L0002402    , L0002403    , L0002404    , L0002405    , L0002406    ,
                   L0002407    , L0002408    , L0002409    ,
5100
5101                L0002410    , L0002411    , L0002412    , L0002413    , L0002414    ,
                   L0002415    , L0002416    , L0002417    ,
5102
5103                L0002418    , L0002419    , L0002420    , L0002421    , L0002422    ,
                   L0002423    , L0002424    , L0002425    ,
5104
5105                L0002426    , L0002427    , L0002428    , L0002429    , L0002430    ,
                   L0002431    , L0002432    , L0002433    ,
5106
5107                L0002434    , L0002435    , L0002436    , L0002437    , L0002438    ,
                   L0002439    , L0002440    , L0002441    ,
5108
5109                L0002442    , L0002443    , VOL1        , VOL2        , VOL3        ,
                   VOL4        , VOL5        , VOL6        ,
5110
5111                VOL7        , VOL8        , VOL9        , VOL10       , VOL11       ,
                   VOL12       , VOL13       , VOL14       ,
5112
5113                VOL15       , VOL16       , L0002444    , L0002445    , L0002446    ,
                   L0002447    , L0002448    , L0002449    ,
5114
5115                L0002450    , L0002451    , L0002452    , L0002453    , L0002454    ,
                   L0002455    , L0002456    , L0002457    ,
5116
5117                L0002458    , L0002459    , L0002460    , L0002461    , L0002462    ,
                   L0002463    , L0002464    , L0002465    ,
5118
5119                L0002466    , L0002467    , L0002468    , L0002469    , L0002470    ,
                   L0002471    , L0002472    , L0002473    ,
5120
5121                L0002474    , L0002475    , L0002476    , L0002477    , L0002478    ,
                   L0002479    , L0002480    , L0002481    ,
5122
5123                L0002482    , L0002483    , L0002484    , L0002485    , L0002486    ,
                   L0002487    , L0002488    , L0002489    ,
5124
5125                L0002490    , L0002491    , L0002492    , L0002493    , L0002494    ,
                   L0002495    , L0002496    , L0002497    ,
5126
5127                L0002498    , L0002499    , L0002500    , L0002501    , L0002502    ,
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                L0002503    , L0002504    , L0002505    ,
5128
5129            L0002506    , L0002507    , L0002508    , L0002509    , L0002510    ,
                L0002511    , L0002512    , L0002513    ,
5130
5131            L0002514    , L0002515    , L0002516    , L0002517    , L0002518    ,
                L0002519    , L0002520    , L0002521    ,
5132  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
5133   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
5134
                                  PAGE  11
5135   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5136
5137
5138                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***
5139
5140   SRCGROUP ID                                          SOURCE IDs
5141   -----------                                          ----------
5142
5143
5144            L0002522    , L0002523    , L0002524    , L0002525    , L0002526    ,
                L0002527    , L0002528    , L0002529    ,
5145
5146            L0002530    , L0002531    , L0002532    , L0002533    , L0002534    ,
                L0002535    , L0002536    , L0002537    ,
5147
5148            L0002538    , L0002539    , L0002540    , L0002541    , L0002542    ,
                L0002543    , L0002544    , L0002545    ,
5149
5150            L0002546    , L0002547    , L0002548    , L0002549    , L0002550    ,
                L0002551    , L0002552    , L0002553    ,
5151
5152            L0002554    , L0002555    , L0002556    , L0002557    , L0002558    ,
                L0002559    , L0002560    , L0002561    ,
5153
5154            L0002562    , L0002563    , L0002564    , L0002565    , L0002566    ,
                L0002567    , L0002568    , L0002569    ,
5155
5156            L0002570    , L0002571    , L0002572    , L0002573    , L0002574    ,
                L0002575    , L0002576    , L0002577    ,
5157
5158            L0002578    , L0002579    , L0002580    , L0002581    , L0002582    ,
                L0002583    , L0002584    , L0002585    ,
5159
5160            L0002586    , L0002587    , L0002588    , L0002589    , L0002590    ,
                L0002591    , L0002592    , L0002593    ,
5161
5162            L0002594    , L0002595    , L0002596    , L0002597    , L0002598    ,
                L0002599    , L0002600    , L0002601    ,
5163
5164            L0002602    , L0002603    , L0002604    , L0002605    , L0002606    ,
                L0002607    , L0002608    , L0002609    ,
5165
5166            L0002610    , L0002611    , L0002612    , L0002613    , L0002614    ,
                L0002615    , L0002616    , L0002617    ,
5167
5168            L0002618    , L0002619    , L0002620    , L0002621    , L0002622    ,
                L0002623    , L0002624    , L0002625    ,
5169
5170            L0002626    , L0002627    , L0002628    , L0002629    , L0002630    ,
                L0002631    , L0002632    , L0002633    ,
5171
5172            L0002634    , L0002635    , L0002636    , L0002637    , L0002638    ,
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                L0002639    , L0002640    , L0002641    ,
5173
5174            L0002642    , L0002643    , L0002644    , L0002645    , L0002646    ,
                L0002647    , L0002648    , L0002649    ,
5175
5176            L0002650    , L0002651    , L0002652    , L0002653    , L0002654    ,
                L0002655    , L0002656    , L0002657    ,
5177
5178            L0002658    , L0002659    , L0002660    , L0002661    , L0002662    ,
                L0002663    , L0002664    , L0002665    ,
5179
5180            L0002666    , L0002667    , L0002668    , L0002669    , L0002670    ,
                L0002671    , L0002672    , L0002673    ,
5181
5182            L0002674    ,
5183  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
    Palmetto Industrial\14848 ***        03/19/26
5184   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
5185
                                  PAGE  12
5186   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5187
5188                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
5189
5190   SOURCE ID = L0002378     ; SOURCE TYPE = VOLUME   :
5191    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
5192   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
5193                                                DAY OF WEEK = WEEKDAY
5194      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
5195      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
5196     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
5197                                                DAY OF WEEK = SATURDAY
5198      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
5199      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
5200     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
5201                                                DAY OF WEEK = SUNDAY
5202      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
5203      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
5204     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
         .0000E+00   23  .0000E+00   24  .0000E+00
5205  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
    Palmetto Industrial\14848 ***        03/19/26
5206   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
5207
                                  PAGE  13
5208   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5209
5210                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
5211
5212   SOURCE ID = L0002379     ; SOURCE TYPE = VOLUME   :
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 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002381 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002382 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

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                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002383     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002384     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
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 .1000E+01   15  .1000E+01   16  .1000E+01
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002385     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE  20
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *
```

```
5365
5366    SOURCE ID = L0002386     ; SOURCE TYPE = VOLUME   :
5367     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
5368    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
5369                                                DAY OF WEEK = WEEKDAY
5370       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5371       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
5372      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5373                                                DAY OF WEEK = SATURDAY
5374       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5375       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5376      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5377                                                DAY OF WEEK = SUNDAY
5378       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5379       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5380      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5381    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
5382     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
5383
                                    PAGE  21
5384    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5385
5386                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
5387
5388    SOURCE ID = L0002387     ; SOURCE TYPE = VOLUME   :
5389     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
5390    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
5391                                                DAY OF WEEK = WEEKDAY
5392       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5393       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
5394      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5395                                                DAY OF WEEK = SATURDAY
5396       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5397       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5398      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5399                                                DAY OF WEEK = SUNDAY
5400       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5401       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5402      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5403    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002388 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002389 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

```
5442      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5443                                                  DAY OF WEEK = SUNDAY
5444       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
5445       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
5446      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5447   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
5448    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
5449
                                    PAGE  24
5450    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5451
5452                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
5453
5454    SOURCE ID = L0002390     ; SOURCE TYPE = VOLUME   :
5455     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
5456    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - - -
5457                                                  DAY OF WEEK = WEEKDAY
5458       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
5459       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
5460      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5461                                                  DAY OF WEEK = SATURDAY
5462       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
5463       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
5464      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5465                                                  DAY OF WEEK = SUNDAY
5466       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
5467       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
5468      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5469   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
5470    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
5471
                                    PAGE  25
5472    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5473
5474                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
5475
5476    SOURCE ID = L0002391     ; SOURCE TYPE = VOLUME   :
5477     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
5478    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - - -
5479                                                  DAY OF WEEK = WEEKDAY
5480       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                              PAGE  26
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002392     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                              PAGE  27
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
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```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002393     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                              PAGE  28
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002394     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002395 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002396 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
5595       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5596      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5597                                                DAY OF WEEK = SUNDAY
5598       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5599       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5600      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5601   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
5602       *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
5603
                                    PAGE  31
5604       *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5605
5606                         * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                             WEEK (HRDOW) *
5607
5608       SOURCE ID = L0002397     ; SOURCE TYPE = VOLUME   :
5609        HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
5610       - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
           - - - - - - - - - - - - - - - - - - - -
5611                                                DAY OF WEEK = WEEKDAY
5612       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5613       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
5614      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5615                                                DAY OF WEEK = SATURDAY
5616       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5617       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5618      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5619                                                DAY OF WEEK = SUNDAY
5620       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5621       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5622      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5623   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
5624       *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
5625
                                    PAGE  32
5626       *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5627
5628                         * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                             WEEK (HRDOW) *
5629
5630       SOURCE ID = L0002398     ; SOURCE TYPE = VOLUME   :
5631        HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
5632       - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
           - - - - - - - - - - - - - - - - - - - -
```

5633 DAY OF WEEK = WEEKDAY
5634 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
5635 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
5636 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
5637 DAY OF WEEK = SATURDAY
5638 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
5639 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
5640 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
5641 DAY OF WEEK = SUNDAY
5642 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
5643 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
5644 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
5645 FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
5646 *** AERMET - VERSION 19191 *** *** ***
17:45:50
5647
PAGE 33
5648 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*
5649
5650 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
5651
5652 SOURCE ID = L0002399 ; SOURCE TYPE = VOLUME :
5653 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
5654 - - -

```
5670    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5671
5672                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
5673
5674    SOURCE ID = L0002400     ; SOURCE TYPE = VOLUME   :
5675     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
5676    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
5677                                                DAY OF WEEK = WEEKDAY
5678       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5679       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
5680      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5681                                                DAY OF WEEK = SATURDAY
5682       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5683       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5684      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5685                                                DAY OF WEEK = SUNDAY
5686       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5687       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5688      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5689    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
5690     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
5691
                                    PAGE  35
5692    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5693
5694                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
5695
5696    SOURCE ID = L0002401     ; SOURCE TYPE = VOLUME   :
5697     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
5698    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
5699                                                DAY OF WEEK = WEEKDAY
5700       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5701       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
5702      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5703                                                DAY OF WEEK = SATURDAY
5704       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5705       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5706      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
5707                                                DAY OF WEEK = SUNDAY
5708       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5709       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
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      .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                                PAGE  36
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002402     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -

                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                                PAGE  37
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002403     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -

                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
```

```
5748       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5749       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5750      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5751                                                DAY OF WEEK = SUNDAY
5752       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5753       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5754      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5755   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
5756    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
5757
                                  PAGE  38
5758    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5759
5760                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
5761
5762    SOURCE ID = L0002404     ; SOURCE TYPE = VOLUME   :
5763     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
5764    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
5765                                                DAY OF WEEK = WEEKDAY
5766       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5767       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
5768      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5769                                                DAY OF WEEK = SATURDAY
5770       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5771       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5772      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5773                                                DAY OF WEEK = SUNDAY
5774       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
5775       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
5776      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
5777   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
5778    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
5779
                                  PAGE  39
5780    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5781
5782                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
5783
5784    SOURCE ID = L0002405     ; SOURCE TYPE = VOLUME   :
5785     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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- - - -
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002407 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 ***

*** ***

17:45:50

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002408 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

```
      .0000E+00    7  .0000E+00    8  .0000E+00
5863     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
5864    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
5865 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
5866  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
5867
                                PAGE  43
5868  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5869
5870                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
5871
5872  SOURCE ID = L0002409     ; SOURCE TYPE = VOLUME   :
5873   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
5874  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
5875                                            DAY OF WEEK = WEEKDAY
5876     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
5877     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
5878    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
5879                                            DAY OF WEEK = SATURDAY
5880     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
5881     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
5882    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
5883                                            DAY OF WEEK = SUNDAY
5884     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
5885     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
5886    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
5887 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
5888  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
5889
                                PAGE  44
5890  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
5891
5892                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
5893
5894  SOURCE ID = L0002410     ; SOURCE TYPE = VOLUME   :
5895   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
5896  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
5897                                            DAY OF WEEK = WEEKDAY
5898     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
5899     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
5900    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002411 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

\- - - -

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  47
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002413     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002414 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002415 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

```
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  50
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002416     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002417     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
*** AERMET - VERSION 19191 ***
*** ***
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002418 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
6091
6092    SOURCE ID = L0002419     ; SOURCE TYPE = VOLUME   :
6093     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
6094    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
6095                                                DAY OF WEEK = WEEKDAY
6096       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6097       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
6098      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6099                                                DAY OF WEEK = SATURDAY
6100       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6101       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6102      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6103                                                DAY OF WEEK = SUNDAY
6104       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6105       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6106      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6107    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
6108     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
6109
                                    PAGE  54
6110     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6111
6112                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
6113
6114     SOURCE ID = L0002420     ; SOURCE TYPE = VOLUME   :
6115     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
6116    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
6117                                                DAY OF WEEK = WEEKDAY
6118       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6119       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
6120      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6121                                                DAY OF WEEK = SATURDAY
6122       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6123       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6124      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6125                                                DAY OF WEEK = SUNDAY
6126       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6127       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6128      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6129    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002421 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002422 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002423     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002424     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE  59
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002425     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                                PAGE  60
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
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```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002426     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  61
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002427     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002428 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002429 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002430     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                              PAGE  65
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002431     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
```

6359 DAY OF WEEK = WEEKDAY
6360 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
6361 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
6362 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
6363 DAY OF WEEK = SATURDAY
6364 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
6365 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
6366 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
6367 DAY OF WEEK = SUNDAY
6368 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
6369 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
6370 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
6371 FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
6372 *** AERMET - VERSION 19191 *** *** ***
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6373
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6374 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*
6375
6376 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
6377
6378 SOURCE ID = L0002432 ; SOURCE TYPE = VOLUME :
6379 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
6380 - - -

```
6396    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6397
6398                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
6399
6400    SOURCE ID = L0002433     ; SOURCE TYPE = VOLUME   :
6401     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
6402    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
6403                                                DAY OF WEEK = WEEKDAY
6404       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6405       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
6406      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
6407                                                DAY OF WEEK = SATURDAY
6408       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6409       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6410      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
6411                                                DAY OF WEEK = SUNDAY
6412       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6413       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6414      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
6415    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
6416     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
6417
                                    PAGE  68
6418    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6419
6420                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
6421
6422    SOURCE ID = L0002434     ; SOURCE TYPE = VOLUME   :
6423     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
6424    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
6425                                                DAY OF WEEK = WEEKDAY
6426       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6427       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
6428      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
6429                                                DAY OF WEEK = SATURDAY
6430       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6431       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6432      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
6433                                                DAY OF WEEK = SUNDAY
6434       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6435       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

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      .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002435     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  70
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002436     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
```

```
6474       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6475       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6476      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6477                                                DAY OF WEEK = SUNDAY
6478       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6479       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6480      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6481   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
6482    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
6483
                                   PAGE  71
6484    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6485
6486                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
6487
6488    SOURCE ID = L0002437     ; SOURCE TYPE = VOLUME   :
6489     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
6490    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
6491                                                DAY OF WEEK = WEEKDAY
6492       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6493       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
6494      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6495                                                DAY OF WEEK = SATURDAY
6496       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6497       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6498      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6499                                                DAY OF WEEK = SUNDAY
6500       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6501       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6502      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6503   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
6504    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
6505
                                   PAGE  72
6506    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6507
6508                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
6509
6510    SOURCE ID = L0002438     ; SOURCE TYPE = VOLUME   :
6511     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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6512    - - -
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                                PAGE  74
*** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                  WEEK (HRDOW) *

SOURCE ID = L0002440     ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                                PAGE  75
*** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                  WEEK (HRDOW) *

SOURCE ID = L0002441     ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

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      .0000E+00    7  .0000E+00    8  .0000E+00
6589     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
6590    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
6591 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
6592  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
6593
                                PAGE  76
6594  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6595
6596                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
6597
6598  SOURCE ID = L0002442     ; SOURCE TYPE = VOLUME   :
6599   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
6600  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
     - - - - - - - - - - - - - - - - - - - -
6601                                              DAY OF WEEK = WEEKDAY
6602     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
6603     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
6604    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
6605                                              DAY OF WEEK = SATURDAY
6606     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
6607     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
6608    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
6609                                              DAY OF WEEK = SUNDAY
6610     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
6611     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
6612    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
6613 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
6614  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
6615
                                PAGE  77
6616  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6617
6618                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
6619
6620  SOURCE ID = L0002443     ; SOURCE TYPE = VOLUME   :
6621   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
6622  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
     - - - - - - - - - - - - - - - - - - - -
6623                                              DAY OF WEEK = WEEKDAY
6624     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
6625     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
6626    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
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      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                                PAGE  78
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL1         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                                PAGE  79
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL2         ; SOURCE TYPE = VOLUME   :
```

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  80
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL3         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL4 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL5 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

```
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL6         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL7         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

```
 .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                              PAGE  85
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL8         ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
 .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE  86
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *
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6817
6818    SOURCE ID = VOL9         ; SOURCE TYPE = VOLUME   :
6819     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
6820    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
6821                                                DAY OF WEEK = WEEKDAY
6822       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6823       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
6824      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6825                                                DAY OF WEEK = SATURDAY
6826       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6827       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6828      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6829                                                DAY OF WEEK = SUNDAY
6830       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6831       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6832      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6833    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
6834     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
6835
                                    PAGE  87
6836     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
6837
6838                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
6839
6840    SOURCE ID = VOL10        ; SOURCE TYPE = VOLUME   :
6841     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
6842    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
6843                                                DAY OF WEEK = WEEKDAY
6844       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6845       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
6846      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6847                                                DAY OF WEEK = SATURDAY
6848       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6849       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6850      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6851                                                DAY OF WEEK = SUNDAY
6852       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
6853       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
6854      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
6855    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL11 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

```
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE  90
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL13        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE  91
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL14        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE  92
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = VOL15        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE  93
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = VOL16        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002444     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002445 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002446 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002447     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                              PAGE  98
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002448     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
```

7085 DAY OF WEEK = WEEKDAY
7086 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
7087 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
7088 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
7089 DAY OF WEEK = SATURDAY
7090 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
7091 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
7092 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
7093 DAY OF WEEK = SUNDAY
7094 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
7095 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
7096 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
7097 FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
7098 *** AERMET - VERSION 19191 *** *** *** 17:45:50
7099

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7100 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*
7101
7102 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
7103
7104 SOURCE ID = L0002449 ; SOURCE TYPE = VOLUME :
7105 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
7106 - - -

```
   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *

   SOURCE ID = L0002450     ; SOURCE TYPE = VOLUME   :
    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
    SCALAR   HOUR   SCALAR   HOUR   SCALAR
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
   Palmetto Industrial\14848 ***        03/19/26
    *** AERMET - VERSION  19191 ***
    ***                                                                    ***
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   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *

   SOURCE ID = L0002451     ; SOURCE TYPE = VOLUME   :
    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
    SCALAR   HOUR   SCALAR   HOUR   SCALAR
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
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      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE 102
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002452     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE 103
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002453     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
```

```
7200       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7201       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7202      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7203                                                DAY OF WEEK = SUNDAY
7204       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7205       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7206      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7207   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7208    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
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7209
                                   PAGE 104
7210    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7211
7212                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
7213
7214    SOURCE ID = L0002454     ; SOURCE TYPE = VOLUME   :
7215     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
7216    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
7217                                                DAY OF WEEK = WEEKDAY
7218       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7219       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
7220      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7221                                                DAY OF WEEK = SATURDAY
7222       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7223       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7224      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7225                                                DAY OF WEEK = SUNDAY
7226       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7227       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7228      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7229   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7230    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
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7231
                                   PAGE 105
7232    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7233
7234                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
7235
7236    SOURCE ID = L0002455     ; SOURCE TYPE = VOLUME   :
7237     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
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- - - -
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002457 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 ***

*** ***

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002458 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

```
      .0000E+00    7  .0000E+00    8  .0000E+00
7315     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
7316    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
7317 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
7318  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
7319
                                PAGE 109
7320  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7321
7322                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
7323
7324  SOURCE ID = L0002459     ; SOURCE TYPE = VOLUME   :
7325   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
7326  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
     - - - - - - - - - - - - - - - - - - - -
7327                                            DAY OF WEEK = WEEKDAY
7328     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
7329     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
7330    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
7331                                            DAY OF WEEK = SATURDAY
7332     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
7333     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
7334    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
7335                                            DAY OF WEEK = SUNDAY
7336     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
7337     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
7338    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
7339 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
7340  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
7341
                                PAGE 110
7342  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7343
7344                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
7345
7346  SOURCE ID = L0002460     ; SOURCE TYPE = VOLUME   :
7347   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
7348  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
     - - - - - - - - - - - - - - - - - - - -
7349                                            DAY OF WEEK = WEEKDAY
7350     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
7351     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
7352    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002461 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 17:45:50

                            PAGE 113
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002463     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002464 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002465 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 116
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002466     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 117
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002467     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

```
 .1000E+01   15  .1000E+01   16  .1000E+01
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 118
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002468     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 119
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *
```

```
 SOURCE ID = L0002469     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 17:45:50

                              PAGE 120
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002470     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002471 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002472 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

```
7620      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7621                                                DAY OF WEEK = SUNDAY
7622       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7623       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
7624      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7625   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7626    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
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7627
                                   PAGE 123
7628    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7629
7630                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
7631
7632    SOURCE ID = L0002473     ; SOURCE TYPE = VOLUME   :
7633     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
7634    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
7635                                                DAY OF WEEK = WEEKDAY
7636       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7637       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
7638      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7639                                                DAY OF WEEK = SATURDAY
7640       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7641       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
7642      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7643                                                DAY OF WEEK = SUNDAY
7644       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7645       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
7646      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7647   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7648    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
7649
                                   PAGE 124
7650    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7651
7652                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
7653
7654    SOURCE ID = L0002474     ; SOURCE TYPE = VOLUME   :
7655     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
7656    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
7657                                                DAY OF WEEK = WEEKDAY
7658       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE 125
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002475     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE 126
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002476     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002477     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002478 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002479 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
7773       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7774      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7775                                              DAY OF WEEK = SUNDAY
7776       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7777       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7778      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7779  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
7780   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
7781
                                  PAGE 130
7782   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7783
7784                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
7785
7786   SOURCE ID = L0002480     ; SOURCE TYPE = VOLUME   :
7787    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
7788   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
7789                                              DAY OF WEEK = WEEKDAY
7790       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7791       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
7792      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7793                                              DAY OF WEEK = SATURDAY
7794       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7795       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7796      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7797                                              DAY OF WEEK = SUNDAY
7798       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7799       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7800      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7801  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
7802   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
7803
                                  PAGE 131
7804   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7805
7806                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
7807
7808   SOURCE ID = L0002481     ; SOURCE TYPE = VOLUME   :
7809    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
7810   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
```

7811 DAY OF WEEK = WEEKDAY
7812 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
7813 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
7814 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
7815 DAY OF WEEK = SATURDAY
7816 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
7817 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
7818 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
7819 DAY OF WEEK = SUNDAY
7820 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
7821 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
7822 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
7823 FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
7824 *** AERMET - VERSION 19191 *** *** *** 17:45:50
7825

PAGE 132

7826 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*
7827
7828 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
7829
7830 SOURCE ID = L0002482 ; SOURCE TYPE = VOLUME :
7831 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
7832 - - -

```
   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *

   SOURCE ID = L0002483     ; SOURCE TYPE = VOLUME   :
    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
    SCALAR   HOUR   SCALAR   HOUR   SCALAR
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
   Palmetto Industrial\14848 ***        03/19/26
    *** AERMET - VERSION  19191 ***
    ***                                                                    ***
    17:45:50

                                PAGE 134
   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *

   SOURCE ID = L0002484     ; SOURCE TYPE = VOLUME   :
    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
    SCALAR   HOUR   SCALAR   HOUR   SCALAR
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
          .0000E+00   15  .0000E+00   16  .0000E+00
7888       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7889    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7890     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
7891
                                    PAGE 135
7892     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7893
7894                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
7895
7896     SOURCE ID = L0002485     ; SOURCE TYPE = VOLUME   :
7897      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
7898     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
7899                                                  DAY OF WEEK = WEEKDAY
7900        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7901        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
7902       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7903                                                  DAY OF WEEK = SATURDAY
7904        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7905        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
7906       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7907                                                  DAY OF WEEK = SUNDAY
7908        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7909        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
7910       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7911    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7912     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
7913
                                    PAGE 136
7914     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7915
7916                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
7917
7918     SOURCE ID = L0002486     ; SOURCE TYPE = VOLUME   :
7919      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
7920     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
7921                                                  DAY OF WEEK = WEEKDAY
7922        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
7923        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
7924       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
7925                                                  DAY OF WEEK = SATURDAY
```

```
7926       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7927       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7928      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7929                                                DAY OF WEEK = SUNDAY
7930       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7931       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7932      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7933   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7934    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
7935
                                   PAGE 137
7936    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7937
7938                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
7939
7940    SOURCE ID = L0002487     ; SOURCE TYPE = VOLUME   :
7941     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
7942    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
7943                                                DAY OF WEEK = WEEKDAY
7944       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7945       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
7946      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7947                                                DAY OF WEEK = SATURDAY
7948       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7949       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7950      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7951                                                DAY OF WEEK = SUNDAY
7952       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
7953       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
7954      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
7955   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
7956    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
7957
                                   PAGE 138
7958    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
7959
7960                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
7961
7962    SOURCE ID = L0002488     ; SOURCE TYPE = VOLUME   :
7963     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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- - - -
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002490 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 *** *** ***

17:45:50

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002491 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

```
        .0000E+00    7  .0000E+00    8  .0000E+00
8041      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
        .0000E+00   15  .0000E+00   16  .0000E+00
8042      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
8043    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
8044     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
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8045
                                    PAGE 142
8046     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8047
8048                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
8049
8050     SOURCE ID = L0002492     ; SOURCE TYPE = VOLUME   :
8051      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8052    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
8053                                                 DAY OF WEEK = WEEKDAY
8054       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
8055       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
        .1000E+01   15  .1000E+01   16  .1000E+01
8056      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
8057                                                 DAY OF WEEK = SATURDAY
8058       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
8059       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
        .0000E+00   15  .0000E+00   16  .0000E+00
8060      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
8061                                                 DAY OF WEEK = SUNDAY
8062       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
8063       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
        .0000E+00   15  .0000E+00   16  .0000E+00
8064      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
8065    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
8066     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
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8067
                                    PAGE 143
8068     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8069
8070                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
8071
8072     SOURCE ID = L0002493     ; SOURCE TYPE = VOLUME   :
8073      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8074    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
8075                                                 DAY OF WEEK = WEEKDAY
8076       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
8077       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
        .1000E+01   15  .1000E+01   16  .1000E+01
8078      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

```
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002494     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 145
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002495     ; SOURCE TYPE = VOLUME   :
```

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002496     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002497 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002498 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

```
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 149
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002499     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 150
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002500     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

```
 .1000E+01   15  .1000E+01   16  .1000E+01
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 151
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002501     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
 17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 152
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *
```

```
8269
8270    SOURCE ID = L0002502     ; SOURCE TYPE = VOLUME   :
8271     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8272    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - - -
8273                                                DAY OF WEEK = WEEKDAY
8274       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8275       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
8276      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8277                                                DAY OF WEEK = SATURDAY
8278       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8279       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8280      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8281                                                DAY OF WEEK = SUNDAY
8282       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8283       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8284      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8285    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
8286     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
8287
                                    PAGE 153
8288     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8289
8290                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
8291
8292     SOURCE ID = L0002503     ; SOURCE TYPE = VOLUME   :
8293     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8294    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - - -
8295                                                DAY OF WEEK = WEEKDAY
8296       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8297       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
8298      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8299                                                DAY OF WEEK = SATURDAY
8300       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8301       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8302      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8303                                                DAY OF WEEK = SUNDAY
8304       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8305       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8306      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8307    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002504 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002505 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

```
8346      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8347                                                DAY OF WEEK = SUNDAY
8348       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8349       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
8350      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8351   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
8352    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
8353
                                   PAGE 156
8354    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8355
8356                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
8357
8358    SOURCE ID = L0002506     ; SOURCE TYPE = VOLUME   :
8359     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8360    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
8361                                                DAY OF WEEK = WEEKDAY
8362       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8363       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
8364      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8365                                                DAY OF WEEK = SATURDAY
8366       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8367       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
8368      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8369                                                DAY OF WEEK = SUNDAY
8370       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8371       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
8372      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8373   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
8374    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
8375
                                   PAGE 157
8376    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8377
8378                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
8379
8380    SOURCE ID = L0002507     ; SOURCE TYPE = VOLUME   :
8381     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8382    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
8383                                                DAY OF WEEK = WEEKDAY
8384       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
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      .0000E+00    7  .0000E+00    8  .0000E+00
8385   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
8386  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8387                                          DAY OF WEEK = SATURDAY
8388   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
8389   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
8390  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8391                                          DAY OF WEEK = SUNDAY
8392   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
8393   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
8394  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8395 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
8396  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
8397
                                PAGE 158
8398  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8399
8400                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
8401
8402  SOURCE ID = L0002508     ; SOURCE TYPE = VOLUME   :
8403   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
8404  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
8405                                          DAY OF WEEK = WEEKDAY
8406    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
8407   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
8408  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8409                                          DAY OF WEEK = SATURDAY
8410   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
8411   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
8412  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8413                                          DAY OF WEEK = SUNDAY
8414   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
8415   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
8416  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8417 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
8418  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
8419
                                PAGE 159
8420  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8421
```

```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002509     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                              PAGE 160
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002510     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002511 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002512 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

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8499       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8500      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
8501                                              DAY OF WEEK = SUNDAY
8502       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8503       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8504      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
8505  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
8506   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
8507
                                  PAGE 163
8508   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8509
8510                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
8511
8512   SOURCE ID = L0002513     ; SOURCE TYPE = VOLUME   :
8513    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
8514   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
8515                                              DAY OF WEEK = WEEKDAY
8516       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8517       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
8518      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
8519                                              DAY OF WEEK = SATURDAY
8520       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8521       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8522      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
8523                                              DAY OF WEEK = SUNDAY
8524       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8525       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8526      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
8527  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
8528   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
8529
                                  PAGE 164
8530   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8531
8532                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
8533
8534   SOURCE ID = L0002514     ; SOURCE TYPE = VOLUME   :
8535    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
8536   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
```

8537 DAY OF WEEK = WEEKDAY
8538 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
8539 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
8540 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
8541 DAY OF WEEK = SATURDAY
8542 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
8543 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
8544 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
8545 DAY OF WEEK = SUNDAY
8546 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
8547 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
8548 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
8549 FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
8550 *** AERMET - VERSION 19191 *** *** *** 17:45:50
8551

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8552 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*
8553
8554 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
8555
8556 SOURCE ID = L0002515 ; SOURCE TYPE = VOLUME :
8557 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
8558 - - -

```
8574    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8575
8576                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
8577
8578    SOURCE ID = L0002516     ; SOURCE TYPE = VOLUME   :
8579     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8580    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
8581                                                DAY OF WEEK = WEEKDAY
8582       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8583       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
8584      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8585                                                DAY OF WEEK = SATURDAY
8586       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8587       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8588      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8589                                                DAY OF WEEK = SUNDAY
8590       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8591       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8592      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8593    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
8594     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
8595
                                    PAGE 167
8596    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8597
8598                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
8599
8600    SOURCE ID = L0002517     ; SOURCE TYPE = VOLUME   :
8601     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8602    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
8603                                                DAY OF WEEK = WEEKDAY
8604       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8605       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
8606      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8607                                                DAY OF WEEK = SATURDAY
8608       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8609       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8610      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8611                                                DAY OF WEEK = SUNDAY
8612       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8613       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
          .0000E+00   15  .0000E+00   16  .0000E+00
8614        17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8615    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
8616     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
8617
                                    PAGE 168
8618     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8619
8620                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
8621
8622     SOURCE ID = L0002518     ; SOURCE TYPE = VOLUME   :
8623      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
8624     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
8625                                                DAY OF WEEK = WEEKDAY
8626        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8627        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
8628       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8629                                                DAY OF WEEK = SATURDAY
8630        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8631        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
8632       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8633                                                DAY OF WEEK = SUNDAY
8634        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8635        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
8636       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8637    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
8638     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
8639
                                    PAGE 169
8640     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8641
8642                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
8643
8644     SOURCE ID = L0002519     ; SOURCE TYPE = VOLUME   :
8645      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
8646     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
8647                                                DAY OF WEEK = WEEKDAY
8648        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
8649        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
8650       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8651                                                DAY OF WEEK = SATURDAY
```

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8652       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8653       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8654      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8655                                                DAY OF WEEK = SUNDAY
8656       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8657       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8658      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8659  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
8660   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
8661
                                  PAGE 170
8662   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8663
8664                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
8665
8666   SOURCE ID = L0002520     ; SOURCE TYPE = VOLUME   :
8667    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
8668   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
8669                                                DAY OF WEEK = WEEKDAY
8670       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8671       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
8672      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8673                                                DAY OF WEEK = SATURDAY
8674       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8675       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8676      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8677                                                DAY OF WEEK = SUNDAY
8678       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
8679       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
8680      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
8681  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
8682   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
8683
                                  PAGE 171
8684   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8685
8686                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
8687
8688   SOURCE ID = L0002521     ; SOURCE TYPE = VOLUME   :
8689    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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8690    - - -
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002523 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 *** *** ***

17:45:50

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002524 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

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      .0000E+00    7  .0000E+00    8  .0000E+00
8767     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
8768    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8769 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
8770  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
8771
                                PAGE 175
8772  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8773
8774                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
8775
8776  SOURCE ID = L0002525     ; SOURCE TYPE = VOLUME   :
8777   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
8778  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
8779                                            DAY OF WEEK = WEEKDAY
8780     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
8781     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
8782    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8783                                            DAY OF WEEK = SATURDAY
8784     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
8785     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
8786    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8787                                            DAY OF WEEK = SUNDAY
8788     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
8789     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
8790    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
8791 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
8792  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
8793
                                PAGE 176
8794  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
8795
8796                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
8797
8798  SOURCE ID = L0002526     ; SOURCE TYPE = VOLUME   :
8799   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
8800  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
8801                                            DAY OF WEEK = WEEKDAY
8802     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
8803     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
8804    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
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      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 177
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002527     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 178
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002528     ; SOURCE TYPE = VOLUME   :
```

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002530 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002531 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

8919 DAY OF WEEK = SUNDAY
8920 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
8921 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
8922 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
8923 FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
8924 *** AERMET - VERSION 19191 *** *** ***
17:45:50
8925
PAGE 182
8926 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*
8927
8928 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
8929
8930 SOURCE ID = L0002532 ; SOURCE TYPE = VOLUME :
8931 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
8932 - - -

```
 .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 184
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002534     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
 .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 185
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *
```

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8995
8996    SOURCE ID = L0002535     ; SOURCE TYPE = VOLUME   :
8997     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
8998    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
8999                                                DAY OF WEEK = WEEKDAY
9000       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9001       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
9002      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9003                                                DAY OF WEEK = SATURDAY
9004       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9005       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9006      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9007                                                DAY OF WEEK = SUNDAY
9008       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9009       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9010      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9011    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
9012     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
9013
                                  PAGE 186
9014    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9015
9016                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9017
9018    SOURCE ID = L0002536     ; SOURCE TYPE = VOLUME   :
9019     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9020    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
9021                                                DAY OF WEEK = WEEKDAY
9022       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9023       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
9024      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9025                                                DAY OF WEEK = SATURDAY
9026       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9027       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9028      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9029                                                DAY OF WEEK = SUNDAY
9030       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9031       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9032      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9033    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002537 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002538 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

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9072      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9073                                                  DAY OF WEEK = SUNDAY
9074       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9075       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9076      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9077   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9078    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9079
                                    PAGE 189
9080    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9081
9082                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9083
9084    SOURCE ID = L0002539     ; SOURCE TYPE = VOLUME   :
9085     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9086    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - - -
9087                                                  DAY OF WEEK = WEEKDAY
9088       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9089       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
9090      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9091                                                  DAY OF WEEK = SATURDAY
9092       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9093       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9094      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9095                                                  DAY OF WEEK = SUNDAY
9096       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9097       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9098      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9099   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9100    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9101
                                    PAGE 190
9102    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9103
9104                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9105
9106    SOURCE ID = L0002540     ; SOURCE TYPE = VOLUME   :
9107     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9108    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - - -
9109                                                  DAY OF WEEK = WEEKDAY
9110       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
9111   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
9112  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9113                                          DAY OF WEEK = SATURDAY
9114   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9115   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9116  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9117                                          DAY OF WEEK = SUNDAY
9118   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9119   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9120  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9121 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
9122  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
9123
                                PAGE 191
9124  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9125
9126                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
9127
9128  SOURCE ID = L0002541     ; SOURCE TYPE = VOLUME   :
9129   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
9130  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
9131                                          DAY OF WEEK = WEEKDAY
9132    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9133    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
9134   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9135                                          DAY OF WEEK = SATURDAY
9136    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9137    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9138   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9139                                          DAY OF WEEK = SUNDAY
9140    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9141    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9142   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9143 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
9144  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
9145
                                PAGE 192
9146  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9147
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```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002542     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                              PAGE 193
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002543     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002544 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002545 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
9225       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9226      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9227                                              DAY OF WEEK = SUNDAY
9228       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9229       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9230      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9231   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9232    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9233
                                  PAGE 196
9234    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9235
9236                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9237
9238    SOURCE ID = L0002546     ; SOURCE TYPE = VOLUME   :
9239     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9240    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
9241                                              DAY OF WEEK = WEEKDAY
9242       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9243       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
9244      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9245                                              DAY OF WEEK = SATURDAY
9246       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9247       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9248      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9249                                              DAY OF WEEK = SUNDAY
9250       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9251       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9252      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9253   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9254    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9255
                                  PAGE 197
9256    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9257
9258                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9259
9260    SOURCE ID = L0002547     ; SOURCE TYPE = VOLUME   :
9261     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9262    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
```

9263 DAY OF WEEK = WEEKDAY
9264 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9265 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
9266 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
9267 DAY OF WEEK = SATURDAY
9268 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9269 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
9270 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
9271 DAY OF WEEK = SUNDAY
9272 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9273 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
9274 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00
9275 FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26
9276 *** AERMET - VERSION 19191 *** *** *** 17:45:50
9277

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9278 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*
9279
9280 * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *
9281
9282 SOURCE ID = L0002548 ; SOURCE TYPE = VOLUME :
9283 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
9284 - - -

```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002549     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                                PAGE 200
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002550     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
          .0000E+00   15  .0000E+00   16  .0000E+00
9340       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9341    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9342     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
9343
                                    PAGE 201
9344     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9345
9346                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
9347
9348     SOURCE ID = L0002551     ; SOURCE TYPE = VOLUME   :
9349      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
9350    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - - -
9351                                                DAY OF WEEK = WEEKDAY
9352        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9353        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
9354       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9355                                                DAY OF WEEK = SATURDAY
9356        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9357        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9358       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9359                                                DAY OF WEEK = SUNDAY
9360        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9361        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9362       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9363    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9364     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
9365
                                    PAGE 202
9366     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9367
9368                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
9369
9370     SOURCE ID = L0002552     ; SOURCE TYPE = VOLUME   :
9371      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
9372    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - - -
9373                                                DAY OF WEEK = WEEKDAY
9374        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9375        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
9376       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9377                                                DAY OF WEEK = SATURDAY
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9378       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9379       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9380      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9381                                                DAY OF WEEK = SUNDAY
9382       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9383       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9384      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9385   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9386    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9387
                                   PAGE 203
9388    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9389
9390                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9391
9392    SOURCE ID = L0002553     ; SOURCE TYPE = VOLUME   :
9393     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9394    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
9395                                                DAY OF WEEK = WEEKDAY
9396       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9397       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
9398      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9399                                                DAY OF WEEK = SATURDAY
9400       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9401       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9402      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9403                                                DAY OF WEEK = SUNDAY
9404       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9405       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9406      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9407   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9408    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9409
                                   PAGE 204
9410    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9411
9412                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9413
9414    SOURCE ID = L0002554     ; SOURCE TYPE = VOLUME   :
9415     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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- - - -
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002556 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 ***

*** ***

17:45:50

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002557 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

```
      .0000E+00    7  .0000E+00    8  .0000E+00
9493     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9494    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9495 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
9496  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
9497
                                PAGE 208
9498  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9499
9500                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
9501
9502  SOURCE ID = L0002558     ; SOURCE TYPE = VOLUME   :
9503   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
9504  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
9505                                            DAY OF WEEK = WEEKDAY
9506     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9507     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
9508    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9509                                            DAY OF WEEK = SATURDAY
9510     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9511     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9512    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9513                                            DAY OF WEEK = SUNDAY
9514     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9515     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9516    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9517 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
     Palmetto Industrial\14848 ***        03/19/26
9518  *** AERMET - VERSION  19191 ***
      ***                                                                    ***
      17:45:50
9519
                                PAGE 209
9520  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9521
9522                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                        WEEK (HRDOW) *
9523
9524  SOURCE ID = L0002559     ; SOURCE TYPE = VOLUME   :
9525   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
      SCALAR   HOUR   SCALAR   HOUR   SCALAR
9526  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - - -
9527                                            DAY OF WEEK = WEEKDAY
9528     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9529     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
9530    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
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      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 210
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002560     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 211
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002561     ; SOURCE TYPE = VOLUME   :
```

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                            PAGE 212
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002562     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002563 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002564 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002565     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                              PAGE 216
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002566     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

```
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002567     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
       .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                                PAGE 218
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *
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```
9721
9722    SOURCE ID = L0002568     ; SOURCE TYPE = VOLUME   :
9723     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9724    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
9725                                                DAY OF WEEK = WEEKDAY
9726       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9727       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
9728      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9729                                                DAY OF WEEK = SATURDAY
9730       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9731       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9732      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9733                                                DAY OF WEEK = SUNDAY
9734       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9735       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9736      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9737    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
9738     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
9739
                                    PAGE 219
9740    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9741
9742                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9743
9744    SOURCE ID = L0002569     ; SOURCE TYPE = VOLUME   :
9745     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9746    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
9747                                                DAY OF WEEK = WEEKDAY
9748       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9749       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
9750      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9751                                                DAY OF WEEK = SATURDAY
9752       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9753       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9754      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9755                                                DAY OF WEEK = SUNDAY
9756       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
9757       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
9758      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
9759    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002570 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002571 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

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9798      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9799                                                DAY OF WEEK = SUNDAY
9800       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9801       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9802      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9803   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9804    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9805
                                   PAGE 222
9806    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9807
9808                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9809
9810    SOURCE ID = L0002572     ; SOURCE TYPE = VOLUME   :
9811     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9812    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
9813                                                DAY OF WEEK = WEEKDAY
9814       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9815       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
9816      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9817                                                DAY OF WEEK = SATURDAY
9818       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9819       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9820      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9821                                                DAY OF WEEK = SUNDAY
9822       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
9823       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
9824      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
9825   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
9826    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
9827
                                   PAGE 223
9828    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9829
9830                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
9831
9832    SOURCE ID = L0002573     ; SOURCE TYPE = VOLUME   :
9833     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
9834    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
9835                                                DAY OF WEEK = WEEKDAY
9836       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
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      .0000E+00    7  .0000E+00    8  .0000E+00
9837   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
9838  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9839                                          DAY OF WEEK = SATURDAY
9840   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9841   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9842  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9843                                          DAY OF WEEK = SUNDAY
9844   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9845   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9846  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9847  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
9848   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
9849
                                  PAGE 224
9850   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9851
9852                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
9853
9854   SOURCE ID = L0002574     ; SOURCE TYPE = VOLUME   :
9855    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
9856   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
9857                                          DAY OF WEEK = WEEKDAY
9858    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
       .0000E+00    7  .0000E+00    8  .0000E+00
9859   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
       .1000E+01   15  .1000E+01   16  .1000E+01
9860  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9861                                          DAY OF WEEK = SATURDAY
9862   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9863   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9864  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9865                                          DAY OF WEEK = SUNDAY
9866   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
9867   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
9868  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
9869  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
9870   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
9871
                                  PAGE 225
9872   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
9873
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                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002575     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 226
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002576     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                 DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                 DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002577 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002578 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

```
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                              PAGE 229
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002579     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                              PAGE 230
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002580     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
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                                                    DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE 231
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002581     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE 232
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10026    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10027
10028                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
10029
10030    SOURCE ID = L0002582     ; SOURCE TYPE = VOLUME   :
10031     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10032    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10033                                                DAY OF WEEK = WEEKDAY
10034       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10035       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10036      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10037                                                DAY OF WEEK = SATURDAY
10038       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10039       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10040      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10041                                                DAY OF WEEK = SUNDAY
10042       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10043       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10044      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10045    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10046     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10047
                                    PAGE 233
10048    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10049
10050                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
10051
10052    SOURCE ID = L0002583     ; SOURCE TYPE = VOLUME   :
10053     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10054    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10055                                                DAY OF WEEK = WEEKDAY
10056       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10057       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10058      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10059                                                DAY OF WEEK = SATURDAY
10060       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10061       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10062      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10063                                                DAY OF WEEK = SUNDAY
10064       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10065       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
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          .0000E+00   15  .0000E+00   16  .0000E+00
10066       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10067    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10068     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10069
                                    PAGE 234
10070     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10071
10072                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
10073
10074     SOURCE ID = L0002584     ; SOURCE TYPE = VOLUME   :
10075      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10076    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10077                                                 DAY OF WEEK = WEEKDAY
10078       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10079       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
10080       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10081                                                 DAY OF WEEK = SATURDAY
10082       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10083       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
10084       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10085                                                 DAY OF WEEK = SUNDAY
10086       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10087       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
10088       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10089    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10090     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10091
                                    PAGE 235
10092     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10093
10094                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
10095
10096     SOURCE ID = L0002585     ; SOURCE TYPE = VOLUME   :
10097      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10098    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10099                                                 DAY OF WEEK = WEEKDAY
10100       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10101       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
10102       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10103                                                 DAY OF WEEK = SATURDAY
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10104       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10105       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10106      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10107                                                DAY OF WEEK = SUNDAY
10108       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10109       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10110      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10111  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
10112   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
10113
                                   PAGE 236
10114   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10115
10116                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10117
10118   SOURCE ID = L0002586     ; SOURCE TYPE = VOLUME   :
10119    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
10120   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
10121                                                DAY OF WEEK = WEEKDAY
10122       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10123       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10124      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10125                                                DAY OF WEEK = SATURDAY
10126       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10127       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10128      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10129                                                DAY OF WEEK = SUNDAY
10130       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10131       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10132      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10133  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
10134   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
10135
                                   PAGE 237
10136   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10137
10138                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10139
10140   SOURCE ID = L0002587     ; SOURCE TYPE = VOLUME   :
10141    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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10142    - - -
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002589 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 ***

*** *** 17:45:50

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002590 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

```
      .0000E+00    7  .0000E+00    8  .0000E+00
10219    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10220   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10221 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
10222  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
10223
                                  PAGE 241
10224  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10225
10226                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
10227
10228  SOURCE ID = L0002591     ; SOURCE TYPE = VOLUME   :
10229   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
10230  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
10231                                              DAY OF WEEK = WEEKDAY
10232    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10233    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
10234   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10235                                              DAY OF WEEK = SATURDAY
10236    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10237    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10238   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10239                                              DAY OF WEEK = SUNDAY
10240    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10241    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10242   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10243 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
10244  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
10245
                                  PAGE 242
10246  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10247
10248                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                       WEEK (HRDOW) *
10249
10250  SOURCE ID = L0002592     ; SOURCE TYPE = VOLUME   :
10251   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
10252  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
10253                                              DAY OF WEEK = WEEKDAY
10254    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10255    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
10256   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

```
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                              PAGE 243
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002593     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 244
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002594     ; SOURCE TYPE = VOLUME   :
```

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                              PAGE 245
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002595     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002596 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002597 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                                    DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                                PAGE 248
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002598     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                                PAGE 249
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002599     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

```
 .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                            PAGE 250
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002600     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
 .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                            PAGE 251
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *
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10447
10448   SOURCE ID = L0002601     ; SOURCE TYPE = VOLUME   :
10449    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
10450   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
10451                                                 DAY OF WEEK = WEEKDAY
10452      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10453      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
10454     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10455                                                 DAY OF WEEK = SATURDAY
10456      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10457      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
10458     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10459                                                 DAY OF WEEK = SUNDAY
10460      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10461      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
10462     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10463   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
10464    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
10465
                                  PAGE 252
10466    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10467
10468                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10469
10470   SOURCE ID = L0002602     ; SOURCE TYPE = VOLUME   :
10471    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
10472   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - - -
10473                                                 DAY OF WEEK = WEEKDAY
10474      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10475      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
10476     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10477                                                 DAY OF WEEK = SATURDAY
10478      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10479      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
10480     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10481                                                 DAY OF WEEK = SUNDAY
10482      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10483      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
10484     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10485   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002603 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002604 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

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10524      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10525                                                 DAY OF WEEK = SUNDAY
10526       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10527       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
10528      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10529   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
10530    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
10531
                                    PAGE 255
10532    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10533
10534                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
10535
10536    SOURCE ID = L0002605     ; SOURCE TYPE = VOLUME   :
10537     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10538    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - - -
10539                                                 DAY OF WEEK = WEEKDAY
10540       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10541       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
10542      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10543                                                 DAY OF WEEK = SATURDAY
10544       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10545       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
10546      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10547                                                 DAY OF WEEK = SUNDAY
10548       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
10549       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
10550      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10551   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
10552    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
10553
                                    PAGE 256
10554    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10555
10556                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
10557
10558    SOURCE ID = L0002606     ; SOURCE TYPE = VOLUME   :
10559     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10560    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - - -
10561                                                 DAY OF WEEK = WEEKDAY
10562       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
10563      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
10564     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10565                                          DAY OF WEEK = SATURDAY
10566      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10567      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10568     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10569                                          DAY OF WEEK = SUNDAY
10570      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10571      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10572     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10573  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
10574   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
10575
                                  PAGE 257
10576   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10577
10578                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10579
10580   SOURCE ID = L0002607     ; SOURCE TYPE = VOLUME   :
10581    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
        SCALAR   HOUR   SCALAR   HOUR   SCALAR
10582   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
10583                                          DAY OF WEEK = WEEKDAY
10584      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10585      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
10586     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10587                                          DAY OF WEEK = SATURDAY
10588      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10589      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10590     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10591                                          DAY OF WEEK = SUNDAY
10592      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10593      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10594     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10595  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
10596   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
10597
                                  PAGE 258
10598   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10599
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10600                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10601
10602    SOURCE ID = L0002608     ; SOURCE TYPE = VOLUME   :
10603     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10604    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10605                                                DAY OF WEEK = WEEKDAY
10606       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10607       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10608      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10609                                                DAY OF WEEK = SATURDAY
10610       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10611       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10612      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10613                                                DAY OF WEEK = SUNDAY
10614       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10615       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10616      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10617    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10618     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10619
                                    PAGE 259
10620    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10621
10622                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10623
10624    SOURCE ID = L0002609     ; SOURCE TYPE = VOLUME   :
10625     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10626    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10627                                                DAY OF WEEK = WEEKDAY
10628       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10629       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10630      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10631                                                DAY OF WEEK = SATURDAY
10632       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10633       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10634      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
10635                                                DAY OF WEEK = SUNDAY
10636       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10637       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10638      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002610 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002611 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

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10677       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10678      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10679                                                DAY OF WEEK = SUNDAY
10680       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10681       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10682      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10683  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
10684   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
10685
                                  PAGE 262
10686   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10687
10688                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10689
10690   SOURCE ID = L0002612     ; SOURCE TYPE = VOLUME   :
10691    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
10692   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
10693                                                DAY OF WEEK = WEEKDAY
10694       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10695       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10696      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10697                                                DAY OF WEEK = SATURDAY
10698       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10699       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10700      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10701                                                DAY OF WEEK = SUNDAY
10702       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10703       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10704      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10705  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/19/26
10706   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
10707
                                  PAGE 263
10708   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10709
10710                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10711
10712   SOURCE ID = L0002613     ; SOURCE TYPE = VOLUME   :
10713    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
10714   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
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                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 264
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002614     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                              PAGE 265
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10752    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10753
10754                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10755
10756    SOURCE ID = L0002615     ; SOURCE TYPE = VOLUME   :
10757     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10758    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10759                                                DAY OF WEEK = WEEKDAY
10760       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10761       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10762      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10763                                                DAY OF WEEK = SATURDAY
10764       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10765       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10766      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10767                                                DAY OF WEEK = SUNDAY
10768       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10769       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10770      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10771    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10772     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10773
                                    PAGE 266
10774    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10775
10776                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
10777
10778    SOURCE ID = L0002616     ; SOURCE TYPE = VOLUME   :
10779     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10780    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
10781                                                DAY OF WEEK = WEEKDAY
10782       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10783       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10784      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10785                                                DAY OF WEEK = SATURDAY
10786       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10787       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10788      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10789                                                DAY OF WEEK = SUNDAY
10790       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10791       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
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          .0000E+00   15  .0000E+00   16  .0000E+00
10792       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10793    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10794     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10795
                                    PAGE 267
10796     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10797
10798                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
10799
10800     SOURCE ID = L0002617     ; SOURCE TYPE = VOLUME   :
10801      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10802     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          - - - - - - - - - - - - - - - - - - - -
10803                                                 DAY OF WEEK = WEEKDAY
10804        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10805        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
10806       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10807                                                 DAY OF WEEK = SATURDAY
10808        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10809        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
10810       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10811                                                 DAY OF WEEK = SUNDAY
10812        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10813        9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
10814       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10815    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10816     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10817
                                    PAGE 268
10818     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10819
10820                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
10821
10822     SOURCE ID = L0002618     ; SOURCE TYPE = VOLUME   :
10823      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
10824     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          - - - - - - - - - - - - - - - - - - - -
10825                                                 DAY OF WEEK = WEEKDAY
10826        1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
10827        9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
          .1000E+01   15  .1000E+01   16  .1000E+01
10828       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
10829                                                 DAY OF WEEK = SATURDAY
```

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10830       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10831       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10832      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10833                                                DAY OF WEEK = SUNDAY
10834       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10835       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10836      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10837    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10838     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10839
                                    PAGE 269
10840     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10841
10842                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
10843
10844     SOURCE ID = L0002619     ; SOURCE TYPE = VOLUME   :
10845      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
10846     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          - - - - - - - - - - - - - - - - - - - -
10847                                                DAY OF WEEK = WEEKDAY
10848       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10849       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
10850      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10851                                                DAY OF WEEK = SATURDAY
10852       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10853       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10854      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10855                                                DAY OF WEEK = SUNDAY
10856       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
10857       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
10858      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
10859    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
10860     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
10861
                                    PAGE 270
10862     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10863
10864                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
10865
10866     SOURCE ID = L0002620     ; SOURCE TYPE = VOLUME   :
10867      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
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10868    - - -
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002622 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 *** *** ***

17:45:50

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002623 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

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      .0000E+00    7  .0000E+00    8  .0000E+00
10945    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10946   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10947 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
10948  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
10949
                                  PAGE 274
10950  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10951
10952                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
10953
10954  SOURCE ID = L0002624     ; SOURCE TYPE = VOLUME   :
10955   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
10956  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
10957                                              DAY OF WEEK = WEEKDAY
10958    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10959    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
10960   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10961                                              DAY OF WEEK = SATURDAY
10962    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10963    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10964   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10965                                              DAY OF WEEK = SUNDAY
10966    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10967    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
10968   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
10969 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
10970  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
10971
                                  PAGE 275
10972  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
10973
10974                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
10975
10976  SOURCE ID = L0002625     ; SOURCE TYPE = VOLUME   :
10977   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
10978  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
10979                                              DAY OF WEEK = WEEKDAY
10980    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
10981    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
10982   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

```
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 17:45:50

                              PAGE 276
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002626     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 17:45:50

                              PAGE 277
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002627     ; SOURCE TYPE = VOLUME   :
```

```
11021     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11022    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
11023                                                DAY OF WEEK = WEEKDAY
11024       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11025       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11026      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11027                                                DAY OF WEEK = SATURDAY
11028       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11029       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11030      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11031                                                DAY OF WEEK = SUNDAY
11032       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11033       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11034      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11035    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11036     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
11037
                                    PAGE 278
11038     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11039
11040                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
11041
11042     SOURCE ID = L0002628     ; SOURCE TYPE = VOLUME   :
11043      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11044    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
11045                                                DAY OF WEEK = WEEKDAY
11046       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11047       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11048      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11049                                                DAY OF WEEK = SATURDAY
11050       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11051       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11052      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11053                                                DAY OF WEEK = SUNDAY
11054       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11055       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11056      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11057    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11058     *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002629 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002630 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                              PAGE 281
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002631     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                              PAGE 282
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002632     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
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 .1000E+01   15  .1000E+01   16  .1000E+01
11136      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11137                                          DAY OF WEEK = SATURDAY
11138       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11139       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11140      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11141                                          DAY OF WEEK = SUNDAY
11142       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11143       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11144      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11145  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
11146   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
11147
                                PAGE 283
11148   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11149
11150                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
11151
11152   SOURCE ID = L0002633     ; SOURCE TYPE = VOLUME   :
11153    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
11154   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
11155                                          DAY OF WEEK = WEEKDAY
11156       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11157       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
 .1000E+01   15  .1000E+01   16  .1000E+01
11158      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11159                                          DAY OF WEEK = SATURDAY
11160       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11161       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11162      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11163                                          DAY OF WEEK = SUNDAY
11164       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11165       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11166      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11167  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
11168   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
11169
                                PAGE 284
11170   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11171
11172                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
```

```
11173
11174    SOURCE ID = L0002634     ; SOURCE TYPE = VOLUME   :
11175     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11176    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
11177                                                DAY OF WEEK = WEEKDAY
11178       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11179       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11180      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11181                                                DAY OF WEEK = SATURDAY
11182       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11183       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11184      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11185                                                DAY OF WEEK = SUNDAY
11186       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11187       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11188      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11189    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11190     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
11191
                                    PAGE 285
11192     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11193
11194                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
11195
11196     SOURCE ID = L0002635     ; SOURCE TYPE = VOLUME   :
11197     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11198    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
11199                                                DAY OF WEEK = WEEKDAY
11200       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11201       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11202      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11203                                                DAY OF WEEK = SATURDAY
11204       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11205       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11206      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11207                                                DAY OF WEEK = SUNDAY
11208       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11209       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11210      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11211    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002636 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002637 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

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11250      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11251                                                DAY OF WEEK = SUNDAY
11252       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11253       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11254      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11255   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
           Palmetto Industrial\14848 ***        03/19/26
11256    *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
11257
                                    PAGE 288
11258    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11259
11260                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
11261
11262    SOURCE ID = L0002638     ; SOURCE TYPE = VOLUME   :
11263     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11264    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
           - - - - - - - - - - - - - - - - - - - -
11265                                                DAY OF WEEK = WEEKDAY
11266       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11267       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11268      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11269                                                DAY OF WEEK = SATURDAY
11270       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11271       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11272      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11273                                                DAY OF WEEK = SUNDAY
11274       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11275       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11276      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11277   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
           Palmetto Industrial\14848 ***        03/19/26
11278    *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
11279
                                    PAGE 289
11280    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11281
11282                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
11283
11284    SOURCE ID = L0002639     ; SOURCE TYPE = VOLUME   :
11285     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11286    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
           - - - - - - - - - - - - - - - - - - - -
11287                                                DAY OF WEEK = WEEKDAY
11288       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
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      .0000E+00    7  .0000E+00    8  .0000E+00
11289      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
11290     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
11291                                          DAY OF WEEK = SATURDAY
11292      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
11293      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
11294     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
11295                                          DAY OF WEEK = SUNDAY
11296      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
11297      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
11298     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
11299 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
11300  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
11301
                                  PAGE 290
11302  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11303
11304                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
11305
11306  SOURCE ID = L0002640     ; SOURCE TYPE = VOLUME   :
11307   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
11308  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
11309                                          DAY OF WEEK = WEEKDAY
11310      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
11311      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
11312     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
11313                                          DAY OF WEEK = SATURDAY
11314      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
11315      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
11316     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
11317                                          DAY OF WEEK = SUNDAY
11318      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
11319      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
11320     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
11321 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
11322  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
11323
                                  PAGE 291
11324  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11325
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```
                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002641     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                              PAGE 292
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                    WEEK (HRDOW) *

 SOURCE ID = L0002642     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002643 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002644 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

```
11403       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11404      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11405                                                DAY OF WEEK = SUNDAY
11406       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11407       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11408      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11409    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11410     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
11411
                                    PAGE 295
11412     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11413
11414                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
11415
11416     SOURCE ID = L0002645     ; SOURCE TYPE = VOLUME   :
11417      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
11418     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          - - - - - - - - - - - - - - - - - - - -
11419                                                DAY OF WEEK = WEEKDAY
11420       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11421       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
11422      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11423                                                DAY OF WEEK = SATURDAY
11424       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11425       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11426      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11427                                                DAY OF WEEK = SUNDAY
11428       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11429       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11430      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11431    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11432     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
11433
                                    PAGE 296
11434     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11435
11436                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
11437
11438     SOURCE ID = L0002646     ; SOURCE TYPE = VOLUME   :
11439      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
11440     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          - - - - - - - - - - - - - - - - - - - -
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                                                    DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                                PAGE 297
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002647     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
     .1000E+01   15  .1000E+01   16  .1000E+01
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
     1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
     9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
    .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
 17:45:50

                                PAGE 298
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   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *

   SOURCE ID = L0002648     ; SOURCE TYPE = VOLUME   :
    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
    SCALAR   HOUR   SCALAR   HOUR   SCALAR
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
   Palmetto Industrial\14848 ***        03/19/26
    *** AERMET - VERSION  19191 ***
    ***                                                                    ***
    17:45:50

                                PAGE 299
    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                     WEEK (HRDOW) *

   SOURCE ID = L0002649     ; SOURCE TYPE = VOLUME   :
    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
    SCALAR   HOUR   SCALAR   HOUR   SCALAR
   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
   - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
     .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

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          .0000E+00   15  .0000E+00   16  .0000E+00
11518       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
11519     FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
          Palmetto Industrial\14848 ***        03/19/26
11520      *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
11521
                                      PAGE 300
11522      *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11523
11524                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
11525
11526      SOURCE ID = L0002650     ; SOURCE TYPE = VOLUME   :
11527       HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
11528      - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
           - - - - - - - - - - - - - - - - - - - -
11529                                                 DAY OF WEEK = WEEKDAY
11530         1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11531         9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11532       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
11533                                                 DAY OF WEEK = SATURDAY
11534         1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11535         9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11536       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
11537                                                 DAY OF WEEK = SUNDAY
11538         1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11539         9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11540       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
11541     FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
          Palmetto Industrial\14848 ***        03/19/26
11542      *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
11543
                                      PAGE 301
11544      *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11545
11546                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
11547
11548      SOURCE ID = L0002651     ; SOURCE TYPE = VOLUME   :
11549       HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
11550      - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
           - - - - - - - - - - - - - - - - - - - -
11551                                                 DAY OF WEEK = WEEKDAY
11552         1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11553         9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11554       17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
11555                                                 DAY OF WEEK = SATURDAY
```

```
11556       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11557       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11558      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11559                                                 DAY OF WEEK = SUNDAY
11560       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11561       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11562      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11563    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11564     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
11565
                                    PAGE 302
11566     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11567
11568                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
11569
11570     SOURCE ID = L0002652     ; SOURCE TYPE = VOLUME   :
11571      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
11572     - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
          - - - - - - - - - - - - - - - - - - - -
11573                                                 DAY OF WEEK = WEEKDAY
11574       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11575       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
11576      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11577                                                 DAY OF WEEK = SATURDAY
11578       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11579       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11580      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11581                                                 DAY OF WEEK = SUNDAY
11582       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
11583       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
11584      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
11585    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11586     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
11587
                                    PAGE 303
11588     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11589
11590                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
11591
11592     SOURCE ID = L0002653     ; SOURCE TYPE = VOLUME   :
11593      HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
           SCALAR   HOUR   SCALAR   HOUR   SCALAR
```

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11594    - - -
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002655 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 24142 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 03/19/26

*** AERMET - VERSION 19191 *** *** ***

17:45:50

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002656 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6					

```
        .0000E+00    7  .0000E+00    8  .0000E+00
11671      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
        .0000E+00   15  .0000E+00   16  .0000E+00
11672     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
11673   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
11674    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
11675
                                    PAGE 307
11676    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11677
11678                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
11679
11680    SOURCE ID = L0002657     ; SOURCE TYPE = VOLUME   :
11681     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
11682    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
11683                                                DAY OF WEEK = WEEKDAY
11684      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
11685      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
        .1000E+01   15  .1000E+01   16  .1000E+01
11686     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
11687                                                DAY OF WEEK = SATURDAY
11688      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
11689      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
        .0000E+00   15  .0000E+00   16  .0000E+00
11690     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
11691                                                DAY OF WEEK = SUNDAY
11692      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
11693      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
        .0000E+00   15  .0000E+00   16  .0000E+00
11694     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
        .0000E+00   23  .0000E+00   24  .0000E+00
11695   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
11696    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
11697
                                    PAGE 308
11698    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11699
11700                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
11701
11702    SOURCE ID = L0002658     ; SOURCE TYPE = VOLUME   :
11703     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
11704    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
11705                                                DAY OF WEEK = WEEKDAY
11706      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
        .0000E+00    7  .0000E+00    8  .0000E+00
11707      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
        .1000E+01   15  .1000E+01   16  .1000E+01
11708     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
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      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
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                              PAGE 309
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002659     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
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                              PAGE 310
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002660     ; SOURCE TYPE = VOLUME   :
```

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
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                              PAGE 311
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002661     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002662 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002663 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                                    DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                                PAGE 314
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002664     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                    DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
 *** AERMET - VERSION  19191 ***
 ***                                                                        ***
 17:45:50

                                PAGE 315
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW) *

 SOURCE ID = L0002665     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - -
                                                    DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

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 .1000E+01   15  .1000E+01   16  .1000E+01
11862      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11863                                          DAY OF WEEK = SATURDAY
11864       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11865       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11866      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11867                                          DAY OF WEEK = SUNDAY
11868       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11869       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11870      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11871  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
11872   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
11873
                                  PAGE 316
11874   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11875
11876                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
11877
11878   SOURCE ID = L0002666     ; SOURCE TYPE = VOLUME   :
11879    HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
         SCALAR   HOUR   SCALAR   HOUR   SCALAR
11880   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - - - -
11881                                          DAY OF WEEK = WEEKDAY
11882       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11883       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
 .1000E+01   15  .1000E+01   16  .1000E+01
11884      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11885                                          DAY OF WEEK = SATURDAY
11886       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11887       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11888      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11889                                          DAY OF WEEK = SUNDAY
11890       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
11891       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
11892      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
11893  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/19/26
11894   *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        17:45:50
11895
                                  PAGE 317
11896   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11897
11898                     * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                          WEEK (HRDOW) *
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11899
11900    SOURCE ID = L0002667     ; SOURCE TYPE = VOLUME   :
11901     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11902    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - - -
11903                                                DAY OF WEEK = WEEKDAY
11904       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11905       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11906      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11907                                                DAY OF WEEK = SATURDAY
11908       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11909       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11910      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11911                                                DAY OF WEEK = SUNDAY
11912       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11913       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11914      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11915    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
11916     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
11917
                                    PAGE 318
11918     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11919
11920                       * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                            WEEK (HRDOW) *
11921
11922    SOURCE ID = L0002668     ; SOURCE TYPE = VOLUME   :
11923     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11924    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - - -
11925                                                DAY OF WEEK = WEEKDAY
11926       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11927       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11928      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11929                                                DAY OF WEEK = SATURDAY
11930       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11931       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11932      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11933                                                DAY OF WEEK = SUNDAY
11934       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11935       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11936      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11937    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002669 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0002670 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

```
11976      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11977                                                DAY OF WEEK = SUNDAY
11978       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11979       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11980      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11981   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
11982    *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
11983
                                    PAGE 321
11984    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
11985
11986                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
11987
11988    SOURCE ID = L0002671     ; SOURCE TYPE = VOLUME   :
11989     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
11990    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - - -
11991                                                DAY OF WEEK = WEEKDAY
11992       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11993       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
           .1000E+01   15  .1000E+01   16  .1000E+01
11994      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11995                                                DAY OF WEEK = SATURDAY
11996       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
11997       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
11998      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
11999                                                DAY OF WEEK = SUNDAY
12000       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
           .0000E+00    7  .0000E+00    8  .0000E+00
12001       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
           .0000E+00   15  .0000E+00   16  .0000E+00
12002      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
           .0000E+00   23  .0000E+00   24  .0000E+00
12003   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
12004    *** AERMET - VERSION  19191 ***
           ***                                                                    ***
           17:45:50
12005
                                    PAGE 322
12006    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12007
12008                      * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                           WEEK (HRDOW) *
12009
12010    SOURCE ID = L0002672     ; SOURCE TYPE = VOLUME   :
12011     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
12012    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - - -
12013                                                DAY OF WEEK = WEEKDAY
12014       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

```
      .0000E+00    7  .0000E+00    8  .0000E+00
12015      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
12016     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
12017                                          DAY OF WEEK = SATURDAY
12018      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
12019      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
12020     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
12021                                          DAY OF WEEK = SUNDAY
12022      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
12023      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
12024     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
12025 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
12026  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
12027
                                  PAGE 323
12028  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12029
12030                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
12031
12032  SOURCE ID = L0002673     ; SOURCE TYPE = VOLUME   :
12033   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
       SCALAR   HOUR   SCALAR   HOUR   SCALAR
12034  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - - - -
12035                                          DAY OF WEEK = WEEKDAY
12036      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
12037      9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
      .1000E+01   15  .1000E+01   16  .1000E+01
12038     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
12039                                          DAY OF WEEK = SATURDAY
12040      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
12041      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
12042     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
12043                                          DAY OF WEEK = SUNDAY
12044      1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
      .0000E+00    7  .0000E+00    8  .0000E+00
12045      9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
      .0000E+00   15  .0000E+00   16  .0000E+00
12046     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
      .0000E+00   23  .0000E+00   24  .0000E+00
12047 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/19/26
12048  *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       17:45:50
12049
                                  PAGE 324
12050  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12051
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12052                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                         WEEK (HRDOW) *
12053
12054    SOURCE ID = L0002674     ; SOURCE TYPE = VOLUME   :
12055     HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
          SCALAR   HOUR   SCALAR   HOUR   SCALAR
12056    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - - -
12057                                                DAY OF WEEK = WEEKDAY
12058       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
12059       9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
            .1000E+01   15  .1000E+01   16  .1000E+01
12060      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
12061                                                DAY OF WEEK = SATURDAY
12062       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
12063       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
12064      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
12065                                                DAY OF WEEK = SUNDAY
12066       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
            .0000E+00    7  .0000E+00    8  .0000E+00
12067       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
            .0000E+00   15  .0000E+00   16  .0000E+00
12068      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
            .0000E+00   23  .0000E+00   24  .0000E+00
12069    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
12070     *** AERMET - VERSION  19191 ***
          ***                                                                    ***
          17:45:50
12071
                                    PAGE 325
12072     *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12073
12074                                              *** DISCRETE CARTESIAN RECEPTORS ***
12075                                           (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
12076                                                        (METERS)
12077
12078          ( 464506.9, 3810141.6,    1063.0,    1063.0,       0.0);         ( 465481.2,
               3810503.5,    1049.8,    1049.8,       0.0);
12079          ( 465406.4, 3810503.0,    1050.6,    1050.6,       0.0);         ( 465212.7,
               3810456.2,    1053.0,    1053.0,       0.0);
12080          ( 464952.4, 3810455.7,    1056.0,    1056.0,       0.0);         ( 465964.7,
               3810432.9,    1048.0,    1048.0,       0.0);
12081          ( 465963.2, 3810384.6,    1048.2,    1048.2,       0.0);         ( 465974.5,
               3810476.1,    1047.0,    1047.0,       0.0);
12082          ( 466001.9, 3810516.5,    1046.0,    1046.0,       0.0);         ( 466028.4,
               3810558.2,    1044.9,    1044.9,       0.0);
12083          ( 466054.6, 3810598.8,    1044.0,    1044.0,       0.0);         ( 466136.4,
               3810670.0,    1042.0,    1042.0,       0.0);
12084          ( 466136.4, 3810635.9,    1042.1,    1042.1,       0.0);         ( 466074.3,
               3810786.8,    1040.2,    1040.2,       0.0);
12085          ( 465468.5, 3810751.9,    1045.5,    1045.5,       0.0);         ( 465266.0,
               3810753.5,    1049.2,    1049.2,       0.0);
12086          ( 465112.4, 3810808.1,    1050.6,    1050.6,       0.0);         ( 465314.5,
               3810854.3,    1047.0,    1047.0,       0.0);
12087          ( 465221.8, 3810854.6,    1048.9,    1048.9,       0.0);         ( 463382.5,
               3811176.2,    1061.1,    1061.1,       0.0);
12088          ( 463250.8, 3811177.8,    1062.2,    1062.2,       0.0);         ( 463278.3,
               3810876.7,    1065.2,    1065.2,       0.0);
12089          ( 465601.6, 3810943.3,    1041.0,    1041.0,       0.0);         ( 464507.2,
               3809995.0,    1066.5,    1066.5,       0.0);
```

```
12090       ( 464508.1, 3809810.8,    1068.8,    1068.8,       0.0);         ( 464509.8,
            3809672.1,    1070.3,    1070.3,       0.0);
12091       ( 464700.5, 3809701.5,    1068.0,    1068.0,       0.0);         ( 464701.3,
            3809618.0,    1069.3,    1069.3,       0.0);
12092       ( 464755.4, 3809565.3,    1069.5,    1069.5,       0.0);         ( 465246.9,
            3809566.2,    1067.0,    1067.0,       0.0);
12093       ( 464785.6, 3809489.1,    1070.3,    1070.3,       0.0);         ( 464694.0,
            3809505.2,    1071.0,    1071.0,       0.0);
12094       ( 464989.3, 3810696.8,    1054.0,    1054.0,       0.0);         ( 467840.7,
            3810027.9,    1029.9,    1029.9,       0.0);
12095       ( 467774.0, 3809972.0,    1031.9,    1031.9,       0.0);         ( 467765.1,
            3810268.7,    1027.6,    1027.6,       0.0);
12096       ( 467360.5, 3810321.9,    1033.9,    1033.9,       0.0);         ( 467361.2,
            3810282.3,    1034.7,    1034.7,       0.0);
12097       ( 467962.7, 3811258.2,    1013.3,    1013.3,
            0.0);
12098   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
12099    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
12100
                                    PAGE 326
12101    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12102
12103                                          *** METEOROLOGICAL DAYS SELECTED FOR
                                               PROCESSING ***
12104                                                        (1=YES; 0=NO)
12105
12106               1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                   1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
12107              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                   1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
12108              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                   1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
12109              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                   1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
12110              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                   1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
12111              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                   1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
12112              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                   1 1 1 1 1   1 1 1 1 1 1 1 1 1 1 1
12113              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
12114
12115                  NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                       IS INCLUDED IN THE DATA FILE.
12116
12117
12118
12119                                     *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                          CATEGORIES ***
12120                                                   (METERS/SEC)
12121
12122                                                1.54,   3.09,   5.14,   8.23,  10.80,
12123   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/19/26
12124    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
12125
                                    PAGE 327
12126    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12127
12128                                      *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA
                                           ***
```

Surface file:
KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
Met Version: 19191
Profile file:
KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
Surface format:
FREE

Profile format:
FREE

Surface station no.: 23161 Upper air station no.: 3120
Name: DAGGETT/FAA_AIRPORT Name:
UNKNOWN
Year: 2015 Year: 2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-24.9	0.256	-9.000	-9.000	-999.	311.	72.1	0.02	4.18	1.00	4.27	251.	10.0	272.5	2.0
15	01	01	1	02	-24.3	0.250	-9.000	-9.000	-999.	300.	68.6	0.02	4.18	1.00	4.17	240.	10.0	272.5	2.0
15	01	01	1	03	-28.4	0.292	-9.000	-9.000	-999.	379.	94.0	0.02	4.18	1.00	4.85	255.	10.0	273.1	2.0
15	01	01	1	04	-26.1	0.266	-9.000	-9.000	-999.	329.	77.8	0.02	4.18	1.00	4.51	274.	10.0	270.4	2.0
15	01	01	1	05	-32.2	0.328	-9.000	-9.000	-999.	450.	118.0	0.02	4.18	1.00	5.51	275.	10.0	270.4	2.0
15	01	01	1	06	-34.9	0.355	-9.000	-9.000	-999.	507.	138.4	0.02	4.18	1.00	5.84	252.	10.0	270.4	2.0
15	01	01	1	07	-34.8	0.355	-9.000	-9.000	-999.	508.	138.9	0.02	4.18	1.00	5.85	251.	10.0	271.4	2.0
15	01	01	1	08	-19.3	0.250	-9.000	-9.000	-999.	306.	68.6	0.02	4.18	0.57	4.15	266.	10.0	270.9	2.0
15	01	01	1	09	31.4	0.236	0.499	0.005	134.	276.	-35.7	0.02	4.18	0.36	3.40	255.	10.0	273.1	2.0
15	01	01	1	10	103.0	0.183	1.101	0.005	441.	188.	-5.0	0.02	4.18	0.29	2.15	300.	10.0	277.0	2.0
15	01	01	1	11	152.0	0.131	1.445	0.005	675.	114.	-1.3	0.04	4.18	0.26	1.08	230.	10.0	278.8	2.0
15	01	01	1	12	175.1	0.131	2.058	0.006	1692.	114.	-1.1	0.02	4.18	0.25	1.31	109.	10.0	280.4	2.0
15	01	01	1	13	171.2	0.143	2.108	0.011	1860.	130.	-1.4	0.01	4.18	0.26	1.55	35.	10.0	281.4	2.0
15	01	01	1	14	140.5	0.177	1.982	0.011	1882.	179.	-3.4	0.01	4.18	0.27	2.16	55.	10.0	282.0	2.0
15	01	01	1	15	84.4	0.150	1.677	0.011	1895.	139.	-3.4	0.02	4.18	0.30	1.77	64.	10.0	282.5	2.0
15	01	01	1	16	8.8	0.148	0.789	0.010	1896.	136.	-31.1	0.02	4.18	0.40	2.15	70.	10.0	282.5	2.0
15	01	01	1	17	-7.9	0.117	-9.000	-9.000	-999.	96.	17.3	0.02	4.18	0.70	2.08	75.	10.0	279.9	2.0
15	01	01	1	18	-3.9	0.085	-9.000	-9.000	-999.	60.	13.5	0.05	4.18	1.00	1.24	196.	10.0	277.0	2.0
15	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.03	4.18	1.00	0.00	0.	10.0	274.9	2.0
15	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.03	4.18	1.00	0.00	0.	10.0	274.9	2.0
15	01	01	1	21	-10.8	0.137	-9.000	-9.000	-999.	121.	20.5	0.02	4.18	1.00	2.36	260.	10.0	274.2	2.0
15	01	01	1	22	-19.5	0.199	-9.000	-9.000	-999.	214.	43.7	0.02	4.18	1.00	3.36	262.	10.0	272.0	2.0

```
12163    15 01 01   1 23  -18.8  0.192 -9.000 -9.000 -999.  202.     40.5  0.04   4.18   1.00
         2.86  230.   10.0  272.0    2.0
12164    15 01 01   1 24  -28.1  0.287 -9.000 -9.000 -999.  370.     90.9  0.02   4.18   1.00
         4.86  270.   10.0  272.0    2.0
12165
12166
12167    First hour of profile data
12168    YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
12169    15 01 01 01   10.0 1  251.    4.27   272.6   99.0  -99.00  -99.00
12170
12171    F indicates top of profile (=1) or below (=0)
12172 FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
         Palmetto Industrial\14848 ***        03/19/26
12173    *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         17:45:50
12174
                                    PAGE 328
12175    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12176
12177                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                                    FOR SOURCE GROUP: ALL      ***
12178                                   INCLUDING SOURCE(S):     L0002378    , L0002379    ,
                                        L0002380    , L0002381    , L0002382    ,
12179                    L0002383    , L0002384    , L0002385    , L0002386    , L0002387    ,
                         L0002388    , L0002389    , L0002390    ,
12180                    L0002391    , L0002392    , L0002393    , L0002394    , L0002395    ,
                         L0002396    , L0002397    , L0002398    ,
12181                    L0002399    , L0002400    , L0002401    , L0002402    , L0002403    ,
                         L0002404    , L0002405    ,  . . .      ,
12182
12183                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***
12184
12185                                      ** CONC OF DPM      IN
                                          MICROGRAMS/M**3                          **
12186
12187          X-COORD (M)   Y-COORD (M)        CONC                      X-COORD (M)   Y-COORD
               (M)        CONC
12188    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
         - - - - - - - - - - - - - - - - - - -
12189             464506.90    3810141.57        0.00078                    465481.17
                  3810503.53        0.02204
12190             465406.43    3810503.02        0.02299                    465212.73
                  3810456.25        0.01135
12191             464952.43    3810455.74        0.00721                    465964.71
                  3810432.92        0.00367
12192             465963.18    3810384.60        0.00302                    465974.54
                  3810476.13        0.00423
12193             466001.90    3810516.53        0.00439                    466028.40
                  3810558.19        0.00431
12194             466054.63    3810598.78        0.00396                    466136.44
                  3810669.97        0.00264
12195             466136.44    3810635.94        0.00282                    466074.30
                  3810786.75        0.00216
12196             465468.45    3810751.95        0.01575                    465265.95
                  3810753.49        0.01429
12197             465112.36    3810808.15        0.00485                    465314.53
                  3810854.32        0.00373
12198             465221.79    3810854.63        0.00342                    463382.51
                  3811176.23        0.00011
12199             463250.80    3811177.76        0.00010                    463278.26
                  3810876.71        0.00012
12200             465601.63    3810943.28        0.00180                    464507.22
                  3809995.00        0.00063
12201             464508.08    3809810.84        0.00068                    464509.81
                  3809672.08        0.00083
```

```
12202           464700.45    3809701.47        0.00493                      464701.32
                3809618.04         0.00486
12203           464755.36    3809565.30        0.00933                      465246.88
                3809566.17         0.00215
12204           464785.59    3809489.06        0.00412                      464694.05
                3809505.22         0.00307
12205           464989.27    3810696.82        0.01485                      467840.66
                3810027.92         0.00025
12206           467774.00    3809972.05        0.00025                      467765.08
                3810268.74         0.00026
12207           467360.52    3810321.90        0.00037                      467361.23
                3810282.35         0.00037
12208           467962.68    3811258.22
                0.00012

12209   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***       03/19/26
12210    *** AERMET - VERSION  19191 ***
         ***                                                                  ***
         17:45:50
12211
                                    PAGE 329
12212    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
12213
12214                                        *** THE SUMMARY OF MAXIMUM PERIOD ( 43848 HRS)
                                            RESULTS ***
12215
12216
12217                                      ** CONC OF DPM      IN
                                           MICROGRAMS/M**3                        **
12218
12219
                         NETWORK
12220   GROUP ID                          AVERAGE CONC                RECEPTOR  (XR, YR, ZELEV,
        ZHILL, ZFLAG)  OF TYPE  GRID-ID
12221   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - -
12222
12223   ALL       1ST HIGHEST VALUE IS       0.02299 AT (  465406.43,  3810503.02,  1050.60,
        1050.60,    0.00)  DC
12224             2ND HIGHEST VALUE IS       0.02204 AT (  465481.17,  3810503.53,  1049.76,
                  1049.76,    0.00)  DC
12225             3RD HIGHEST VALUE IS       0.01575 AT (  465468.45,  3810751.95,  1045.47,
                  1045.47,    0.00)  DC
12226             4TH HIGHEST VALUE IS       0.01485 AT (  464989.27,  3810696.82,  1054.00,
                  1054.00,    0.00)  DC
12227             5TH HIGHEST VALUE IS       0.01429 AT (  465265.95,  3810753.49,  1049.19,
                  1049.19,    0.00)  DC
12228             6TH HIGHEST VALUE IS       0.01135 AT (  465212.73,  3810456.25,  1053.00,
                  1053.00,    0.00)  DC
12229             7TH HIGHEST VALUE IS       0.00933 AT (  464755.36,  3809565.30,  1069.50,
                  1069.50,    0.00)  DC
12230             8TH HIGHEST VALUE IS       0.00721 AT (  464952.43,  3810455.74,  1056.00,
                  1056.00,    0.00)  DC
12231             9TH HIGHEST VALUE IS       0.00493 AT (  464700.45,  3809701.47,  1068.00,
                  1068.00,    0.00)  DC
12232            10TH HIGHEST VALUE IS       0.00486 AT (  464701.32,  3809618.04,  1069.26,
                 1069.26,    0.00)  DC
12233
12234
12235    *** RECEPTOR TYPES:  GC = GRIDCART
12236                         GP = GRIDPOLR
12237                         DC = DISCCART
12238                         DP = DISCPOLR
12239   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***       03/19/26
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   4 Warning Message(s)
A Total of   637 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   446 Missing Hours Identified (1.02 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   4563   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   4563   MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450   17545   CHKDAT: Record Out of Sequence in Meteorological File at: 18010101
MX W450   17545   CHKDAT: Record Out of Sequence in Meteorological File at: 1 year gap

   ****
   *** AERMOD Finishes Successfully ***
   ****

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 3/24/2026
** File: C:\Users\Alyssa Barnett\Desktop\HRA\14848 Palmetto Industrial\14848 Ops\14848 Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14848 Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001369
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 465137.392, 3810605.322, 1052.85, 3.49, 4.00
** 465480.977, 3810605.322, 1047.94, 3.49, 4.00
** ------------------------------------------------------------------------
   LOCATION L0001397     VOLUME   465141.687 3810605.322 1052.61
   LOCATION L0001398     VOLUME   465150.277 3810605.322 1052.32
   LOCATION L0001399     VOLUME   465158.867 3810605.322 1052.04
   LOCATION L0001400     VOLUME   465167.457 3810605.322 1052.00
   LOCATION L0001401     VOLUME   465176.047 3810605.322 1052.00
   LOCATION L0001402     VOLUME   465184.637 3810605.322 1052.00
   LOCATION L0001403     VOLUME   465193.227 3810605.322 1051.93
   LOCATION L0001404     VOLUME   465201.817 3810605.322 1051.75
   LOCATION L0001405     VOLUME   465210.407 3810605.322 1051.56
   LOCATION L0001406     VOLUME   465218.997 3810605.322 1051.38
   LOCATION L0001407     VOLUME   465227.587 3810605.322 1051.26
   LOCATION L0001408     VOLUME   465236.177 3810605.322 1051.16
   LOCATION L0001409     VOLUME   465244.767 3810605.322 1051.06
   LOCATION L0001410     VOLUME   465253.357 3810605.322 1050.93
   LOCATION L0001411     VOLUME   465261.947 3810605.322 1050.74
   LOCATION L0001412     VOLUME   465270.537 3810605.322 1050.56
   LOCATION L0001413     VOLUME   465279.127 3810605.322 1050.37
```

```
   LOCATION L0001414     VOLUME   465287.717 3810605.322 1050.26
   LOCATION L0001415     VOLUME   465296.307 3810605.322 1050.16
   LOCATION L0001416     VOLUME   465304.897 3810605.322 1050.06
   LOCATION L0001417     VOLUME   465313.487 3810605.322 1050.00
   LOCATION L0001418     VOLUME   465322.077 3810605.322 1050.00
   LOCATION L0001419     VOLUME   465330.667 3810605.322 1050.00
   LOCATION L0001420     VOLUME   465339.257 3810605.322 1050.00
   LOCATION L0001421     VOLUME   465347.847 3810605.322 1049.83
   LOCATION L0001422     VOLUME   465356.437 3810605.322 1049.65
   LOCATION L0001423     VOLUME   465365.027 3810605.322 1049.46
   LOCATION L0001424     VOLUME   465373.617 3810605.322 1049.31
   LOCATION L0001425     VOLUME   465382.207 3810605.322 1049.21
   LOCATION L0001426     VOLUME   465390.797 3810605.322 1049.11
   LOCATION L0001427     VOLUME   465399.387 3810605.322 1049.01
   LOCATION L0001428     VOLUME   465407.977 3810605.322 1048.83
   LOCATION L0001429     VOLUME   465416.567 3810605.322 1048.64
   LOCATION L0001430     VOLUME   465425.157 3810605.322 1048.46
   LOCATION L0001431     VOLUME   465433.747 3810605.322 1048.31
   LOCATION L0001432     VOLUME   465442.337 3810605.322 1048.21
   LOCATION L0001433     VOLUME   465450.927 3810605.322 1048.11
   LOCATION L0001434     VOLUME   465459.517 3810605.322 1048.01
   LOCATION L0001435     VOLUME   465468.107 3810605.322 1048.00
   LOCATION L0001436     VOLUME   465476.697 3810605.322 1048.00
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Palmetto 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 4.335E-08
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 464947.412, 3810532.648, 1056.00, 3.49, 4.00
** 465005.361, 3810539.256, 1055.06, 3.49, 4.00
** 465073.985, 3810540.781, 1054.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001835     VOLUME   464951.679 3810533.135 1055.99
   LOCATION L0001836     VOLUME   464960.214 3810534.108 1055.91
   LOCATION L0001837     VOLUME   464968.749 3810535.081 1055.81
   LOCATION L0001838     VOLUME   464977.283 3810536.054 1055.69
   LOCATION L0001839     VOLUME   464985.818 3810537.028 1055.51
   LOCATION L0001840     VOLUME   464994.353 3810538.001 1055.31
   LOCATION L0001841     VOLUME   465002.888 3810538.974 1055.13
   LOCATION L0001842     VOLUME   465011.460 3810539.392 1054.95
   LOCATION L0001843     VOLUME   465020.048 3810539.583 1054.66
   LOCATION L0001844     VOLUME   465028.636 3810539.773 1054.38
   LOCATION L0001845     VOLUME   465037.224 3810539.964 1054.09
   LOCATION L0001846     VOLUME   465045.812 3810540.155 1054.00
   LOCATION L0001847     VOLUME   465054.399 3810540.346 1054.00
   LOCATION L0001848     VOLUME   465062.987 3810540.537 1054.00
   LOCATION L0001849     VOLUME   465071.575 3810540.728 1054.00
** End of LINE VOLUME Source ID = SLINE3
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Palmetto 25%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.015E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
```

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** 465074.273, 3810540.960, 1054.00, 3.49, 4.00
** 465393.632, 3810538.463, 1050.25, 3.49, 4.00
** 465476.048, 3810539.087, 1049.15, 3.49, 4.00
** 465526.621, 3810547.516, 1048.15, 3.49, 4.00
** 465584.062, 3810564.374, 1048.05, 3.49, 4.00
** 465625.582, 3810584.665, 1047.09, 3.49, 4.00
** 465655.863, 3810603.708, 1046.23, 3.49, 4.00
** ------------------------------------------------------------------
   LOCATION L0001850     VOLUME   465078.568 3810540.927 1054.00
   LOCATION L0001851     VOLUME   465087.157 3810540.859 1054.00
   LOCATION L0001852     VOLUME   465095.747 3810540.792 1054.00
   LOCATION L0001853     VOLUME   465104.337 3810540.725 1053.85
   LOCATION L0001854     VOLUME   465112.927 3810540.658 1053.57
   LOCATION L0001855     VOLUME   465121.516 3810540.591 1053.28
   LOCATION L0001856     VOLUME   465130.106 3810540.524 1053.00
   LOCATION L0001857     VOLUME   465138.696 3810540.456 1053.00
   LOCATION L0001858     VOLUME   465147.286 3810540.389 1053.00
   LOCATION L0001859     VOLUME   465155.875 3810540.322 1053.00
   LOCATION L0001860     VOLUME   465164.465 3810540.255 1052.85
   LOCATION L0001861     VOLUME   465173.055 3810540.188 1052.56
   LOCATION L0001862     VOLUME   465181.645 3810540.121 1052.28
   LOCATION L0001863     VOLUME   465190.234 3810540.053 1052.00
   LOCATION L0001864     VOLUME   465198.824 3810539.986 1052.00
   LOCATION L0001865     VOLUME   465207.414 3810539.919 1052.00
   LOCATION L0001866     VOLUME   465216.003 3810539.852 1052.00
   LOCATION L0001867     VOLUME   465224.593 3810539.785 1052.00
   LOCATION L0001868     VOLUME   465233.183 3810539.717 1052.00
   LOCATION L0001869     VOLUME   465241.773 3810539.650 1052.00
   LOCATION L0001870     VOLUME   465250.362 3810539.583 1051.99
   LOCATION L0001871     VOLUME   465258.952 3810539.516 1051.86
   LOCATION L0001872     VOLUME   465267.542 3810539.449 1051.74
   LOCATION L0001873     VOLUME   465276.132 3810539.382 1051.61
   LOCATION L0001874     VOLUME   465284.721 3810539.314 1051.47
   LOCATION L0001875     VOLUME   465293.311 3810539.247 1051.31
   LOCATION L0001876     VOLUME   465301.901 3810539.180 1051.15
   LOCATION L0001877     VOLUME   465310.491 3810539.113 1050.99
   LOCATION L0001878     VOLUME   465319.080 3810539.046 1050.87
   LOCATION L0001879     VOLUME   465327.670 3810538.979 1050.74
   LOCATION L0001880     VOLUME   465336.260 3810538.911 1050.62
   LOCATION L0001881     VOLUME   465344.850 3810538.844 1050.57
   LOCATION L0001882     VOLUME   465353.439 3810538.777 1050.57
   LOCATION L0001883     VOLUME   465362.029 3810538.710 1050.57
   LOCATION L0001884     VOLUME   465370.619 3810538.643 1050.56
   LOCATION L0001885     VOLUME   465379.208 3810538.576 1050.40
   LOCATION L0001886     VOLUME   465387.798 3810538.508 1050.24
   LOCATION L0001887     VOLUME   465396.388 3810538.484 1050.07
   LOCATION L0001888     VOLUME   465404.978 3810538.549 1049.93
   LOCATION L0001889     VOLUME   465413.567 3810538.614 1049.81
   LOCATION L0001890     VOLUME   465422.157 3810538.679 1049.69
   LOCATION L0001891     VOLUME   465430.747 3810538.744 1049.56
   LOCATION L0001892     VOLUME   465439.337 3810538.809 1049.39
   LOCATION L0001893     VOLUME   465447.926 3810538.874 1049.23
   LOCATION L0001894     VOLUME   465456.516 3810538.939 1049.07
   LOCATION L0001895     VOLUME   465465.106 3810539.004 1049.00
   LOCATION L0001896     VOLUME   465473.696 3810539.069 1048.57
   LOCATION L0001897     VOLUME   465482.201 3810540.113 1048.54
   LOCATION L0001898     VOLUME   465490.674 3810541.525 1048.49
   LOCATION L0001899     VOLUME   465499.147 3810542.937 1048.44
   LOCATION L0001900     VOLUME   465507.620 3810544.349 1048.39
   LOCATION L0001901     VOLUME   465516.093 3810545.761 1048.35
   LOCATION L0001902     VOLUME   465524.566 3810547.174 1048.30
   LOCATION L0001903     VOLUME   465532.865 3810549.348 1048.23
   LOCATION L0001904     VOLUME   465541.107 3810551.767 1048.15
   LOCATION L0001905     VOLUME   465549.350 3810554.186 1048.07
   LOCATION L0001906     VOLUME   465557.592 3810556.605 1048.00
   LOCATION L0001907     VOLUME   465565.834 3810559.024 1047.95
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   LOCATION L0001908     VOLUME   465574.077 3810561.443 1047.86
   LOCATION L0001909     VOLUME   465582.319 3810563.862 1047.74
   LOCATION L0001910     VOLUME   465590.148 3810567.348 1047.63
   LOCATION L0001911     VOLUME   465597.865 3810571.120 1047.50
   LOCATION L0001912     VOLUME   465605.583 3810574.891 1047.38
   LOCATION L0001913     VOLUME   465613.300 3810578.663 1047.22
   LOCATION L0001914     VOLUME   465621.018 3810582.435 1047.08
   LOCATION L0001915     VOLUME   465628.554 3810586.534 1046.99
   LOCATION L0001916     VOLUME   465635.825 3810591.107 1046.84
   LOCATION L0001917     VOLUME   465643.097 3810595.680 1046.61
   LOCATION L0001918     VOLUME   465650.368 3810600.253 1046.34
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Amargosa 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.596E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 15
** 465655.863, 3810603.396, 1046.24, 3.49, 4.00
** 465689.891, 3810627.122, 1046.00, 3.49, 4.00
** 465695.510, 3810626.497, 1045.93, 3.49, 4.00
** 465710.807, 3810615.883, 1045.78, 3.49, 4.00
** 465636.508, 3810500.377, 1048.00, 3.49, 4.00
** 465492.906, 3810279.978, 1052.95, 3.49, 4.00
** 465332.757, 3810033.356, 1057.45, 3.49, 4.00
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    LOCATION L0001977     VOLUME   465473.099 3810249.477 1053.22
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    LOCATION L0001979     VOLUME   465463.743 3810235.069 1053.70
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    LOCATION L0001985     VOLUME   465435.673 3810191.843 1054.11
    LOCATION L0001986     VOLUME   465430.995 3810184.638 1054.36
    LOCATION L0001987     VOLUME   465426.317 3810177.434 1054.62
    LOCATION L0001988     VOLUME   465421.639 3810170.230 1054.86
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    LOCATION L0001993     VOLUME   465398.247 3810134.208 1056.00
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    LOCATION L0001995     VOLUME   465388.891 3810119.800 1056.00
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    LOCATION L0002001     VOLUME   465360.822 3810076.574 1056.98
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    LOCATION L0002007     VOLUME   465332.752 3810033.348 1057.56
    LOCATION L0002008     VOLUME   465327.950 3810026.225 1057.79
    LOCATION L0002009     VOLUME   465323.148 3810019.103 1057.95
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332      LOCATION L0002014     VOLUME   465299.139 3809983.490 1058.41
333      LOCATION L0002015     VOLUME   465294.337 3809976.368 1058.67
334      LOCATION L0002016     VOLUME   465289.535 3809969.245 1058.86
335      LOCATION L0002017     VOLUME   465284.733 3809962.123 1058.97
336      LOCATION L0002018     VOLUME   465279.931 3809955.000 1059.03
337      LOCATION L0002019     VOLUME   465275.130 3809947.878 1059.39
338      LOCATION L0002020     VOLUME   465270.328 3809940.755 1059.67
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341      LOCATION L0002023     VOLUME   465255.922 3809919.388 1060.18
342      LOCATION L0002024     VOLUME   465251.120 3809912.265 1060.44
343      LOCATION L0002025     VOLUME   465246.318 3809905.143 1060.61
344      LOCATION L0002026     VOLUME   465241.517 3809898.020 1060.67
345      LOCATION L0002027     VOLUME   465236.715 3809890.898 1060.63
346      LOCATION L0002028     VOLUME   465231.913 3809883.775 1060.64
347      LOCATION L0002029     VOLUME   465226.618 3809877.029 1060.71
348      LOCATION L0002030     VOLUME   465221.010 3809870.523 1060.85
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350      LOCATION L0002032     VOLUME   465209.794 3809857.509 1061.28
351      LOCATION L0002033     VOLUME   465204.186 3809851.002 1061.50
352      LOCATION L0002034     VOLUME   465198.578 3809844.495 1061.72
353      LOCATION L0002035     VOLUME   465192.970 3809837.988 1061.93
354      LOCATION L0002036     VOLUME   465186.942 3809831.936 1062.00
355      LOCATION L0002037     VOLUME   465180.018 3809826.852 1062.00
356      LOCATION L0002038     VOLUME   465173.095 3809821.767 1062.00
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361      LOCATION L0002043     VOLUME   465134.769 3809802.602 1062.86
362      LOCATION L0002044     VOLUME   465126.780 3809799.446 1063.02
363      LOCATION L0002045     VOLUME   465118.791 3809796.290 1063.12
364      LOCATION L0002046     VOLUME   465110.476 3809794.241 1063.25
365      LOCATION L0002047     VOLUME   465102.049 3809792.578 1063.41
366      LOCATION L0002048     VOLUME   465093.622 3809790.915 1063.50
367      LOCATION L0002049     VOLUME   465085.044 3809790.686 1063.51
368      LOCATION L0002050     VOLUME   465076.455 3809790.571 1063.51
369      LOCATION L0002051     VOLUME   465067.866 3809790.456 1063.52
370      LOCATION L0002052     VOLUME   465059.277 3809790.341 1063.52
371      LOCATION L0002053     VOLUME   465050.687 3809790.226 1063.52
372      LOCATION L0002054     VOLUME   465042.098 3809790.111 1063.53
373      LOCATION L0002055     VOLUME   465033.509 3809789.996 1063.63
374      LOCATION L0002056     VOLUME   465024.920 3809789.881 1063.77
375      LOCATION L0002057     VOLUME   465016.333 3809790.077 1063.90
376      LOCATION L0002058     VOLUME   465007.748 3809790.359 1064.00
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380      LOCATION L0002062     VOLUME   464973.407 3809791.485 1064.00
381      LOCATION L0002063     VOLUME   464964.821 3809791.766 1064.00
382      LOCATION L0002064     VOLUME   464956.236 3809792.048 1064.00
383      LOCATION L0002065     VOLUME   464947.650 3809792.329 1064.04
384    ** End of LINE VOLUME Source ID = SLINE5
385    ** ----------------------------------------------------------------------
386    ** Line Source Represented by Adjacent Volume Sources
387    ** LINE VOLUME Source ID = SLINE6
388    ** DESCRSRC Main 100%
389    ** PREFIX
390    ** Length of Side = 14.00
391    ** Configuration = Adjacent
392    ** Emission Rate = 6.335E-06
393    ** Vertical Dimension = 6.99
394    ** SZINIT = 3.25
395    ** Nodes = 9
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   LOCATION L0002075     VOLUME   464813.904 3809792.468 1065.74
   LOCATION L0002076     VOLUME   464799.904 3809792.447 1066.00
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   LOCATION L0002082     VOLUME   464736.832 3809771.451 1067.00
   LOCATION L0002083     VOLUME   464736.849 3809757.451 1067.00
   LOCATION L0002084     VOLUME   464736.866 3809743.451 1067.01
   LOCATION L0002085     VOLUME   464736.883 3809729.451 1067.06
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   LOCATION L0002087     VOLUME   464736.916 3809701.451 1067.54
   LOCATION L0002088     VOLUME   464736.933 3809687.451 1067.95
   LOCATION L0002089     VOLUME   464736.950 3809673.451 1068.00
   LOCATION L0002090     VOLUME   464736.967 3809659.451 1068.00
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   LOCATION L0002092     VOLUME   464737.001 3809631.451 1068.82
   LOCATION L0002093     VOLUME   464737.018 3809617.451 1069.03
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   LOCATION L0002095     VOLUME   464737.052 3809589.451 1069.29
   LOCATION L0002096     VOLUME   464737.069 3809575.451 1069.71
   LOCATION L0002097     VOLUME   464737.086 3809561.451 1070.00
   LOCATION L0002098     VOLUME   464737.102 3809547.451 1070.00
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   LOCATION L0002102     VOLUME   464779.532 3809534.514 1070.00
   LOCATION L0002103     VOLUME   464793.530 3809534.726 1070.00
   LOCATION L0002104     VOLUME   464807.529 3809534.939 1069.76
   LOCATION L0002105     VOLUME   464821.527 3809535.152 1069.30
   LOCATION L0002106     VOLUME   464835.526 3809535.364 1069.02
   LOCATION L0002107     VOLUME   464849.510 3809535.963 1069.00
   LOCATION L0002108     VOLUME   464863.489 3809536.734 1068.97
   LOCATION L0002109     VOLUME   464877.468 3809537.504 1068.95
   LOCATION L0002110     VOLUME   464891.447 3809538.274 1068.92
   LOCATION L0002111     VOLUME   464905.426 3809539.044 1068.90
   LOCATION L0002112     VOLUME   464919.404 3809539.814 1068.87
   LOCATION L0002113     VOLUME   464933.383 3809540.585 1068.47
   LOCATION L0002114     VOLUME   464947.362 3809541.355 1068.07
   LOCATION L0002115     VOLUME   464961.353 3809541.763 1068.00
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   LOCATION L0002117     VOLUME   464989.351 3809542.069 1068.00
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   LOCATION L0002125     VOLUME   465101.322 3809542.572 1067.78
   LOCATION L0002126     VOLUME   465115.317 3809542.177 1067.79
   LOCATION L0002127     VOLUME   465129.311 3809541.782 1067.81
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** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC Onsite 75%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.242E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
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   LOCATION L0001735     VOLUME   465637.572 3810625.533 1046.00
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   LOCATION L0001737     VOLUME   465626.373 3810638.561 1046.00
   LOCATION L0001738     VOLUME   465619.837 3810636.714 1046.00
   LOCATION L0001739     VOLUME   465612.936 3810631.599 1046.00
   LOCATION L0001740     VOLUME   465606.035 3810626.485 1046.08
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   LOCATION L0001742     VOLUME   465592.233 3810616.255 1046.59
   LOCATION L0001743     VOLUME   465585.217 3810611.304 1046.85
   LOCATION L0001744     VOLUME   465578.028 3810606.603 1047.02
   LOCATION L0001745     VOLUME   465570.838 3810601.902 1047.14
   LOCATION L0001746     VOLUME   465563.649 3810597.201 1047.34
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   LOCATION L0001751     VOLUME   465523.654 3810584.746 1048.00
   LOCATION L0001752     VOLUME   465515.066 3810584.652 1048.00
   LOCATION L0001753     VOLUME   465506.476 3810584.652 1048.00
   LOCATION L0001754     VOLUME   465497.886 3810584.652 1048.00
   LOCATION L0001755     VOLUME   465489.296 3810584.652 1048.00
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Onsite 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 5.378E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
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   LOCATION L0001759     VOLUME   465166.164 3810585.441 1052.01
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   LOCATION L0001761     VOLUME   465183.344 3810585.398 1052.00
   LOCATION L0001762     VOLUME   465191.934 3810585.377 1052.00
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   LOCATION L0001764     VOLUME   465209.114 3810585.334 1052.00
   LOCATION L0001765     VOLUME   465217.704 3810585.313 1052.00
   LOCATION L0001766     VOLUME   465226.294 3810585.291 1051.79
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   LOCATION L0001768     VOLUME   465243.474 3810585.249 1051.24
   LOCATION L0001769     VOLUME   465252.064 3810585.227 1051.02
   LOCATION L0001770     VOLUME   465260.653 3810585.206 1051.02
   LOCATION L0001771     VOLUME   465269.243 3810585.185 1051.01
   LOCATION L0001772     VOLUME   465277.833 3810585.163 1051.00
   LOCATION L0001773     VOLUME   465286.423 3810585.142 1050.79
   LOCATION L0001774     VOLUME   465295.013 3810585.120 1050.51
   LOCATION L0001775     VOLUME   465303.603 3810585.099 1050.23
   LOCATION L0001776     VOLUME   465312.193 3810585.078 1050.03
   LOCATION L0001777     VOLUME   465320.783 3810585.056 1050.02
   LOCATION L0001778     VOLUME   465329.373 3810585.035 1050.01
   LOCATION L0001779     VOLUME   465337.963 3810585.014 1050.00
   LOCATION L0001780     VOLUME   465346.553 3810584.992 1050.00
   LOCATION L0001781     VOLUME   465355.143 3810584.971 1050.00
   LOCATION L0001782     VOLUME   465363.733 3810584.949 1050.00
   LOCATION L0001783     VOLUME   465372.323 3810584.928 1049.92
   LOCATION L0001784     VOLUME   465380.913 3810584.907 1049.65
   LOCATION L0001785     VOLUME   465389.503 3810584.885 1049.37
   LOCATION L0001786     VOLUME   465398.093 3810584.864 1049.10
   LOCATION L0001787     VOLUME   465406.683 3810584.843 1049.03
   LOCATION L0001788     VOLUME   465415.273 3810584.821 1049.02
   LOCATION L0001789     VOLUME   465423.863 3810584.800 1049.01
   LOCATION L0001790     VOLUME   465432.453 3810584.779 1048.92
   LOCATION L0001791     VOLUME   465441.043 3810584.757 1048.65
   LOCATION L0001792     VOLUME   465449.633 3810584.736 1048.37
   LOCATION L0001793     VOLUME   465458.223 3810584.714 1048.10
   LOCATION L0001794     VOLUME   465466.813 3810584.693 1048.00
   LOCATION L0001795     VOLUME   465475.403 3810584.672 1048.00
** End of LINE VOLUME Source ID = SLINE8
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Onsite 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.831E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
** 464941.656, 3810586.812, 1055.17, 3.49, 4.00
** 464942.520, 3810557.862, 1055.97, 3.49, 4.00
** 464946.409, 3810544.467, 1055.93, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001796     VOLUME   465130.940 3810585.544 1052.97
   LOCATION L0001797     VOLUME   465122.350 3810585.602 1053.00
   LOCATION L0001798     VOLUME   465113.760 3810585.660 1053.01
   LOCATION L0001799     VOLUME   465105.170 3810585.717 1053.01
   LOCATION L0001800     VOLUME   465096.581 3810585.775 1053.12
   LOCATION L0001801     VOLUME   465087.991 3810585.832 1053.40
   LOCATION L0001802     VOLUME   465079.401 3810585.890 1053.69
   LOCATION L0001803     VOLUME   465070.811 3810585.947 1053.97
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   LOCATION L0001804     VOLUME   465062.221 3810586.005 1054.00
   LOCATION L0001805     VOLUME   465053.632 3810586.062 1054.00
   LOCATION L0001806     VOLUME   465045.042 3810586.120 1054.00
   LOCATION L0001807     VOLUME   465036.452 3810586.177 1054.12
   LOCATION L0001808     VOLUME   465027.862 3810586.235 1054.40
   LOCATION L0001809     VOLUME   465019.272 3810586.292 1054.68
   LOCATION L0001810     VOLUME   465010.682 3810586.350 1054.96
   LOCATION L0001811     VOLUME   465002.093 3810586.407 1054.99
   LOCATION L0001812     VOLUME   464993.503 3810586.465 1054.99
   LOCATION L0001813     VOLUME   464984.913 3810586.522 1055.00
   LOCATION L0001814     VOLUME   464976.323 3810586.580 1055.00
   LOCATION L0001815     VOLUME   464967.733 3810586.637 1055.00
   LOCATION L0001816     VOLUME   464959.144 3810586.695 1055.00
   LOCATION L0001817     VOLUME   464950.554 3810586.752 1055.00
   LOCATION L0001818     VOLUME   464941.964 3810586.810 1055.26
   LOCATION L0001819     VOLUME   464941.903 3810578.534 1055.45
   LOCATION L0001820     VOLUME   464942.159 3810569.948 1055.65
   LOCATION L0001821     VOLUME   464942.416 3810561.362 1055.86
   LOCATION L0001822     VOLUME   464943.939 3810552.975 1056.00
   LOCATION L0001823     VOLUME   464946.334 3810544.725 1056.00
** End of LINE VOLUME Source ID = SLINE9
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Onsite 20%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.904E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 465073.877, 3810553.973, 1054.00, 3.49, 4.00
** 465073.445, 3810585.948, 1053.98, 3.49, 4.00
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001824     VOLUME   465073.819 3810558.267 1053.99
   LOCATION L0001825     VOLUME   465073.703 3810566.857 1053.95
   LOCATION L0001826     VOLUME   465073.587 3810575.446 1053.92
   LOCATION L0001827     VOLUME   465073.471 3810584.035 1053.89
   LOCATION L0001828     VOLUME   465080.122 3810585.901 1053.66
   LOCATION L0001829     VOLUME   465088.712 3810585.841 1053.38
   LOCATION L0001830     VOLUME   465097.301 3810585.781 1053.09
   LOCATION L0001831     VOLUME   465105.891 3810585.721 1053.01
   LOCATION L0001832     VOLUME   465114.481 3810585.661 1053.00
   LOCATION L0001833     VOLUME   465123.071 3810585.601 1053.00
   LOCATION L0001834     VOLUME   465131.661 3810585.541 1052.94
** End of LINE VOLUME Source ID = SLINE10
   LOCATION STCK1        POINT      465521.650  3810719.260     1045.560
** DESCRSRC Fire Pump
   LOCATION STCK2        POINT      465515.495  3810718.939     1045.640
** DESCRSRC Emergency Generator
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0001397     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001398     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001399     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001400     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001401     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001402     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001403     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001404     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001405     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001406     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001407     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001408     0.0000003422      3.49      4.00      3.25
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   SRCPARAM L0001409     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001410     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001411     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001412     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001413     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001414     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001415     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001416     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001417     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001418     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001419     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001420     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001421     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001422     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001423     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001424     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001425     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001426     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001427     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001428     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001429     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001430     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001431     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001432     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001433     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001434     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001435     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001436     0.0000003422      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0001835     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001836     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001837     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001838     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001839     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001840     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001841     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001842     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001843     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001844     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001845     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001846     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001847     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001848     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001849     0.00000000289      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0001850     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001851     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001852     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001853     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001854     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001855     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001856     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001857     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001858     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001859     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001860     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001861     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001862     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001863     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001864     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001865     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001866     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001867     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001868     0.00000001471      3.49      4.00      3.25
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   SRCPARAM L0001869     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001870     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001871     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001872     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001873     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001874     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001875     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001876     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001877     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001878     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001879     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001880     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001881     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001882     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001883     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001884     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001885     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001886     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001887     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001888     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001889     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001890     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001891     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001892     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001893     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001894     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001895     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001896     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001897     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001898     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001899     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001900     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001901     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001902     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001903     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001904     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001905     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001906     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001907     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001908     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001909     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001910     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001911     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001912     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001913     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001914     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001915     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001916     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001917     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001918     0.00000001471      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0001919     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001920     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001921     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001922     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001923     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001924     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001925     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001926     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001927     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001928     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001929     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001930     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001931     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001932     0.00000005848      3.49      4.00      3.25
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792      SRCPARAM L0001933     0.00000005848      3.49      4.00      3.25
793      SRCPARAM L0001934     0.00000005848      3.49      4.00      3.25
794      SRCPARAM L0001935     0.00000005848      3.49      4.00      3.25
795      SRCPARAM L0001936     0.00000005848      3.49      4.00      3.25
796      SRCPARAM L0001937     0.00000005848      3.49      4.00      3.25
797      SRCPARAM L0001938     0.00000005848      3.49      4.00      3.25
798      SRCPARAM L0001939     0.00000005848      3.49      4.00      3.25
799      SRCPARAM L0001940     0.00000005848      3.49      4.00      3.25
800      SRCPARAM L0001941     0.00000005848      3.49      4.00      3.25
801      SRCPARAM L0001942     0.00000005848      3.49      4.00      3.25
802      SRCPARAM L0001943     0.00000005848      3.49      4.00      3.25
803      SRCPARAM L0001944     0.00000005848      3.49      4.00      3.25
804      SRCPARAM L0001945     0.00000005848      3.49      4.00      3.25
805      SRCPARAM L0001946     0.00000005848      3.49      4.00      3.25
806      SRCPARAM L0001947     0.00000005848      3.49      4.00      3.25
807      SRCPARAM L0001948     0.00000005848      3.49      4.00      3.25
808      SRCPARAM L0001949     0.00000005848      3.49      4.00      3.25
809      SRCPARAM L0001950     0.00000005848      3.49      4.00      3.25
810      SRCPARAM L0001951     0.00000005848      3.49      4.00      3.25
811      SRCPARAM L0001952     0.00000005848      3.49      4.00      3.25
812      SRCPARAM L0001953     0.00000005848      3.49      4.00      3.25
813      SRCPARAM L0001954     0.00000005848      3.49      4.00      3.25
814      SRCPARAM L0001955     0.00000005848      3.49      4.00      3.25
815      SRCPARAM L0001956     0.00000005848      3.49      4.00      3.25
816      SRCPARAM L0001957     0.00000005848      3.49      4.00      3.25
817      SRCPARAM L0001958     0.00000005848      3.49      4.00      3.25
818      SRCPARAM L0001959     0.00000005848      3.49      4.00      3.25
819      SRCPARAM L0001960     0.00000005848      3.49      4.00      3.25
820      SRCPARAM L0001961     0.00000005848      3.49      4.00      3.25
821      SRCPARAM L0001962     0.00000005848      3.49      4.00      3.25
822      SRCPARAM L0001963     0.00000005848      3.49      4.00      3.25
823      SRCPARAM L0001964     0.00000005848      3.49      4.00      3.25
824      SRCPARAM L0001965     0.00000005848      3.49      4.00      3.25
825      SRCPARAM L0001966     0.00000005848      3.49      4.00      3.25
826      SRCPARAM L0001967     0.00000005848      3.49      4.00      3.25
827      SRCPARAM L0001968     0.00000005848      3.49      4.00      3.25
828      SRCPARAM L0001969     0.00000005848      3.49      4.00      3.25
829      SRCPARAM L0001970     0.00000005848      3.49      4.00      3.25
830      SRCPARAM L0001971     0.00000005848      3.49      4.00      3.25
831      SRCPARAM L0001972     0.00000005848      3.49      4.00      3.25
832      SRCPARAM L0001973     0.00000005848      3.49      4.00      3.25
833      SRCPARAM L0001974     0.00000005848      3.49      4.00      3.25
834      SRCPARAM L0001975     0.00000005848      3.49      4.00      3.25
835      SRCPARAM L0001976     0.00000005848      3.49      4.00      3.25
836      SRCPARAM L0001977     0.00000005848      3.49      4.00      3.25
837      SRCPARAM L0001978     0.00000005848      3.49      4.00      3.25
838      SRCPARAM L0001979     0.00000005848      3.49      4.00      3.25
839      SRCPARAM L0001980     0.00000005848      3.49      4.00      3.25
840      SRCPARAM L0001981     0.00000005848      3.49      4.00      3.25
841      SRCPARAM L0001982     0.00000005848      3.49      4.00      3.25
842      SRCPARAM L0001983     0.00000005848      3.49      4.00      3.25
843      SRCPARAM L0001984     0.00000005848      3.49      4.00      3.25
844      SRCPARAM L0001985     0.00000005848      3.49      4.00      3.25
845      SRCPARAM L0001986     0.00000005848      3.49      4.00      3.25
846      SRCPARAM L0001987     0.00000005848      3.49      4.00      3.25
847      SRCPARAM L0001988     0.00000005848      3.49      4.00      3.25
848      SRCPARAM L0001989     0.00000005848      3.49      4.00      3.25
849      SRCPARAM L0001990     0.00000005848      3.49      4.00      3.25
850      SRCPARAM L0001991     0.00000005848      3.49      4.00      3.25
851      SRCPARAM L0001992     0.00000005848      3.49      4.00      3.25
852      SRCPARAM L0001993     0.00000005848      3.49      4.00      3.25
853      SRCPARAM L0001994     0.00000005848      3.49      4.00      3.25
854      SRCPARAM L0001995     0.00000005848      3.49      4.00      3.25
855      SRCPARAM L0001996     0.00000005848      3.49      4.00      3.25
856      SRCPARAM L0001997     0.00000005848      3.49      4.00      3.25
857      SRCPARAM L0001998     0.00000005848      3.49      4.00      3.25
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858      SRCPARAM L0001999     0.00000005848      3.49      4.00      3.25
859      SRCPARAM L0002000     0.00000005848      3.49      4.00      3.25
860      SRCPARAM L0002001     0.00000005848      3.49      4.00      3.25
861      SRCPARAM L0002002     0.00000005848      3.49      4.00      3.25
862      SRCPARAM L0002003     0.00000005848      3.49      4.00      3.25
863      SRCPARAM L0002004     0.00000005848      3.49      4.00      3.25
864      SRCPARAM L0002005     0.00000005848      3.49      4.00      3.25
865      SRCPARAM L0002006     0.00000005848      3.49      4.00      3.25
866      SRCPARAM L0002007     0.00000005848      3.49      4.00      3.25
867      SRCPARAM L0002008     0.00000005848      3.49      4.00      3.25
868      SRCPARAM L0002009     0.00000005848      3.49      4.00      3.25
869      SRCPARAM L0002010     0.00000005848      3.49      4.00      3.25
870      SRCPARAM L0002011     0.00000005848      3.49      4.00      3.25
871      SRCPARAM L0002012     0.00000005848      3.49      4.00      3.25
872      SRCPARAM L0002013     0.00000005848      3.49      4.00      3.25
873      SRCPARAM L0002014     0.00000005848      3.49      4.00      3.25
874      SRCPARAM L0002015     0.00000005848      3.49      4.00      3.25
875      SRCPARAM L0002016     0.00000005848      3.49      4.00      3.25
876      SRCPARAM L0002017     0.00000005848      3.49      4.00      3.25
877      SRCPARAM L0002018     0.00000005848      3.49      4.00      3.25
878      SRCPARAM L0002019     0.00000005848      3.49      4.00      3.25
879      SRCPARAM L0002020     0.00000005848      3.49      4.00      3.25
880      SRCPARAM L0002021     0.00000005848      3.49      4.00      3.25
881      SRCPARAM L0002022     0.00000005848      3.49      4.00      3.25
882      SRCPARAM L0002023     0.00000005848      3.49      4.00      3.25
883      SRCPARAM L0002024     0.00000005848      3.49      4.00      3.25
884      SRCPARAM L0002025     0.00000005848      3.49      4.00      3.25
885      SRCPARAM L0002026     0.00000005848      3.49      4.00      3.25
886      SRCPARAM L0002027     0.00000005848      3.49      4.00      3.25
887      SRCPARAM L0002028     0.00000005848      3.49      4.00      3.25
888      SRCPARAM L0002029     0.00000005848      3.49      4.00      3.25
889      SRCPARAM L0002030     0.00000005848      3.49      4.00      3.25
890      SRCPARAM L0002031     0.00000005848      3.49      4.00      3.25
891      SRCPARAM L0002032     0.00000005848      3.49      4.00      3.25
892      SRCPARAM L0002033     0.00000005848      3.49      4.00      3.25
893      SRCPARAM L0002034     0.00000005848      3.49      4.00      3.25
894      SRCPARAM L0002035     0.00000005848      3.49      4.00      3.25
895      SRCPARAM L0002036     0.00000005848      3.49      4.00      3.25
896      SRCPARAM L0002037     0.00000005848      3.49      4.00      3.25
897      SRCPARAM L0002038     0.00000005848      3.49      4.00      3.25
898      SRCPARAM L0002039     0.00000005848      3.49      4.00      3.25
899      SRCPARAM L0002040     0.00000005848      3.49      4.00      3.25
900      SRCPARAM L0002041     0.00000005848      3.49      4.00      3.25
901      SRCPARAM L0002042     0.00000005848      3.49      4.00      3.25
902      SRCPARAM L0002043     0.00000005848      3.49      4.00      3.25
903      SRCPARAM L0002044     0.00000005848      3.49      4.00      3.25
904      SRCPARAM L0002045     0.00000005848      3.49      4.00      3.25
905      SRCPARAM L0002046     0.00000005848      3.49      4.00      3.25
906      SRCPARAM L0002047     0.00000005848      3.49      4.00      3.25
907      SRCPARAM L0002048     0.00000005848      3.49      4.00      3.25
908      SRCPARAM L0002049     0.00000005848      3.49      4.00      3.25
909      SRCPARAM L0002050     0.00000005848      3.49      4.00      3.25
910      SRCPARAM L0002051     0.00000005848      3.49      4.00      3.25
911      SRCPARAM L0002052     0.00000005848      3.49      4.00      3.25
912      SRCPARAM L0002053     0.00000005848      3.49      4.00      3.25
913      SRCPARAM L0002054     0.00000005848      3.49      4.00      3.25
914      SRCPARAM L0002055     0.00000005848      3.49      4.00      3.25
915      SRCPARAM L0002056     0.00000005848      3.49      4.00      3.25
916      SRCPARAM L0002057     0.00000005848      3.49      4.00      3.25
917      SRCPARAM L0002058     0.00000005848      3.49      4.00      3.25
918      SRCPARAM L0002059     0.00000005848      3.49      4.00      3.25
919      SRCPARAM L0002060     0.00000005848      3.49      4.00      3.25
920      SRCPARAM L0002061     0.00000005848      3.49      4.00      3.25
921      SRCPARAM L0002062     0.00000005848      3.49      4.00      3.25
922      SRCPARAM L0002063     0.00000005848      3.49      4.00      3.25
923      SRCPARAM L0002064     0.00000005848      3.49      4.00      3.25
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   SRCPARAM L0002065     0.00000005848      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0002066     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002067     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002068     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002069     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002070     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002071     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002072     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002073     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002074     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002075     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002076     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002077     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002078     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002079     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002080     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002081     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002082     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002083     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002084     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002085     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002086     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002087     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002088     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002089     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002090     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002091     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002092     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002093     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002094     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002095     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002096     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002097     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002098     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002099     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002100     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002101     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002102     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002103     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002104     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002105     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002106     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002107     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002108     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002109     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002110     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002111     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002112     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002113     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002114     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002115     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002116     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002117     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002118     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002119     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002120     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002121     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002122     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002123     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002124     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002125     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002126     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002127     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002128     0.00000009598      3.49      6.51      3.25
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   SRCPARAM L0002129     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002130     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002131     0.00000009598      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0001734     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001735     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001736     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001737     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001738     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001739     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001740     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001741     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001742     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001743     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001744     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001745     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001746     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001747     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001748     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001749     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001750     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001751     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001752     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001753     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001754     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001755     0.0000001019      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0001756     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001757     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001758     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001759     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001760     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001761     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001762     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001763     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001764     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001765     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001766     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001767     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001768     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001769     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001770     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001771     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001772     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001773     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001774     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001775     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001776     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001777     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001778     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001779     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001780     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001781     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001782     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001783     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001784     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001785     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001786     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001787     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001788     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001789     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001790     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001791     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001792     0.0000001344      3.49      4.00      3.25
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   SRCPARAM L0001793     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001794     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001795     0.0000001344      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0001796     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001797     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001798     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001799     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001800     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001801     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001802     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001803     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001804     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001805     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001806     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001807     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001808     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001809     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001810     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001811     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001812     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001813     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001814     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001815     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001816     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001817     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001818     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001819     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001820     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001821     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001822     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001823     0.000000006539      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0001824     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001825     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001826     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001827     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001828     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001829     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001830     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001831     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001832     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001833     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001834     0.0000000264      3.49      4.00      3.25
** ------------------------------------------------------------------
   SRCPARAM STCK1           0.0125     3.550   728.550     54.78      0.13
   SRCPARAM STCK2        0.029166667     3.840   798.160    160.56      0.17

** Building Downwash **
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63

   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63

   BUILDWID STCK1         438.73   440.26   428.41   403.54   366.40   318.14
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     BUILDWID STCK1          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK1          368.21   404.96   429.41   440.81   438.82   425.78
     BUILDWID STCK1          438.73   440.26   428.41   403.54   366.40   318.14
     BUILDWID STCK1          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK1          368.21   404.96   429.41   440.81   438.82   425.78

     BUILDWID STCK2          438.73   440.26   428.41   403.54   366.40   318.14
     BUILDWID STCK2          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK2          368.21   404.96   429.41   440.81   438.82   425.78
     BUILDWID STCK2          438.73   440.26   428.41   403.54   366.40   318.14
     BUILDWID STCK2          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK2          368.21   404.96   429.41   440.81   438.82   425.78

     BUILDLEN STCK1          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK1          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK1          403.54   366.40   318.14   260.21   194.37   127.97
     BUILDLEN STCK1          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK1          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK1          403.54   366.40   318.14   260.21   194.37   127.97

     BUILDLEN STCK2          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK2          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK2          403.54   366.40   318.14   260.21   194.37   127.97
     BUILDLEN STCK2          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK2          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK2          403.54   366.40   318.14   260.21   194.37   127.97

     XBADJ    STCK1         -191.22  -256.13  -313.25  -360.86  -397.50  -422.07
     XBADJ    STCK1         -433.81  -432.37  -419.69  -413.82  -395.37  -364.91
     XBADJ    STCK1         -323.36  -271.99  -212.35  -146.26   -75.72    -4.80
     XBADJ    STCK1           -5.72    -6.46    -7.01    -7.35    -7.46    -7.35
     XBADJ    STCK1           -7.01    -6.46    -6.09   -24.92   -44.89   -63.50
     XBADJ    STCK1          -80.18   -94.42  -105.79  -113.95  -118.65  -123.17

     XBADJ    STCK2         -189.83  -253.72  -309.89  -356.65  -392.58  -416.57
     XBADJ    STCK2         -427.91  -426.25  -413.53  -407.80  -389.69  -359.73
     XBADJ    STCK2         -318.85  -268.27  -209.54  -144.45   -74.97    -5.12
     XBADJ    STCK2           -7.10    -8.87   -10.37   -11.55   -12.38   -12.84
     XBADJ    STCK2          -12.91   -12.58   -12.25   -30.93   -50.57   -68.67
     XBADJ    STCK2          -84.69   -98.13  -108.60  -115.76  -119.40  -122.85

     YBADJ    STCK1          194.45   175.24   150.70   121.59    88.78    53.28
     YBADJ    STCK1           16.15   -21.46   -59.19   -92.75  -124.83  -153.12
     YBADJ    STCK1         -176.76  -195.02  -207.36  -213.40  -212.96  -206.80
     YBADJ    STCK1         -194.45  -175.24  -150.70  -121.59   -88.78   -53.28
     YBADJ    STCK1          -16.15    21.46    59.19    92.75   124.83   153.12
     YBADJ    STCK1          176.76   195.02   207.36   213.40   212.96   206.80

     YBADJ    STCK2          188.44   169.56   145.53   117.08    85.07    50.47
     YBADJ    STCK2           14.35   -22.22   -58.87   -91.36  -122.42  -149.76
     YBADJ    STCK2         -172.55  -190.10  -201.87  -207.50  -206.83  -200.64
     YBADJ    STCK2         -188.44  -169.56  -145.53  -117.08   -85.07   -50.47
     YBADJ    STCK2          -14.35    22.22    58.87    91.36   122.42   149.76
     YBADJ    STCK2          172.55   190.10   201.87   207.50   206.83   200.64


  ** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
  ** Variable Emission Scenario: "Scenario 1"
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
```

```
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
    INCLUDED "14848 Ops.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
    SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
    PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
    SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
    UAIRDATA 3120 2015
    PROFBASE 588.3 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
```

```
   PLOTFILE PERIOD ALL "14848 Ops.AD\PE00GALL.PLT" 31
   SUMMFILE "14848 Ops.sum"
OU FINISHED
**
**************************************
** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**

```

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 3/24/2026
** File: C:\Users\Alyssa Barnett\Desktop\HRA\14848 Palmetto Industrial\14848 Ops\14848 Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848
   MODELOPT DFAULT CONC
   AVERTIME PERIOD
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14848 Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001369
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 465137.392, 3810605.322, 1052.85, 3.49, 4.00
** 465480.977, 3810605.322, 1047.94, 3.49, 4.00
** ------------------------------------------------------------------------
   LOCATION L0001397     VOLUME   465141.687 3810605.322 1052.61
   LOCATION L0001398     VOLUME   465150.277 3810605.322 1052.32
   LOCATION L0001399     VOLUME   465158.867 3810605.322 1052.04
   LOCATION L0001400     VOLUME   465167.457 3810605.322 1052.00
   LOCATION L0001401     VOLUME   465176.047 3810605.322 1052.00
   LOCATION L0001402     VOLUME   465184.637 3810605.322 1052.00
   LOCATION L0001403     VOLUME   465193.227 3810605.322 1051.93
   LOCATION L0001404     VOLUME   465201.817 3810605.322 1051.75
   LOCATION L0001405     VOLUME   465210.407 3810605.322 1051.56
   LOCATION L0001406     VOLUME   465218.997 3810605.322 1051.38
   LOCATION L0001407     VOLUME   465227.587 3810605.322 1051.26
   LOCATION L0001408     VOLUME   465236.177 3810605.322 1051.16
   LOCATION L0001409     VOLUME   465244.767 3810605.322 1051.06
   LOCATION L0001410     VOLUME   465253.357 3810605.322 1050.93
   LOCATION L0001411     VOLUME   465261.947 3810605.322 1050.74
   LOCATION L0001412     VOLUME   465270.537 3810605.322 1050.56
   LOCATION L0001413     VOLUME   465279.127 3810605.322 1050.37
```

```
   LOCATION L0001414     VOLUME   465287.717 3810605.322 1050.26
   LOCATION L0001415     VOLUME   465296.307 3810605.322 1050.16
   LOCATION L0001416     VOLUME   465304.897 3810605.322 1050.06
   LOCATION L0001417     VOLUME   465313.487 3810605.322 1050.00
   LOCATION L0001418     VOLUME   465322.077 3810605.322 1050.00
   LOCATION L0001419     VOLUME   465330.667 3810605.322 1050.00
   LOCATION L0001420     VOLUME   465339.257 3810605.322 1050.00
   LOCATION L0001421     VOLUME   465347.847 3810605.322 1049.83
   LOCATION L0001422     VOLUME   465356.437 3810605.322 1049.65
   LOCATION L0001423     VOLUME   465365.027 3810605.322 1049.46
   LOCATION L0001424     VOLUME   465373.617 3810605.322 1049.31
   LOCATION L0001425     VOLUME   465382.207 3810605.322 1049.21
   LOCATION L0001426     VOLUME   465390.797 3810605.322 1049.11
   LOCATION L0001427     VOLUME   465399.387 3810605.322 1049.01
   LOCATION L0001428     VOLUME   465407.977 3810605.322 1048.83
   LOCATION L0001429     VOLUME   465416.567 3810605.322 1048.64
   LOCATION L0001430     VOLUME   465425.157 3810605.322 1048.46
   LOCATION L0001431     VOLUME   465433.747 3810605.322 1048.31
   LOCATION L0001432     VOLUME   465442.337 3810605.322 1048.21
   LOCATION L0001433     VOLUME   465450.927 3810605.322 1048.11
   LOCATION L0001434     VOLUME   465459.517 3810605.322 1048.01
   LOCATION L0001435     VOLUME   465468.107 3810605.322 1048.00
   LOCATION L0001436     VOLUME   465476.697 3810605.322 1048.00
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Palmetto 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 4.335E-08
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 464947.412, 3810532.648, 1056.00, 3.49, 4.00
** 465005.361, 3810539.256, 1055.06, 3.49, 4.00
** 465073.985, 3810540.781, 1054.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001835     VOLUME   464951.679 3810533.135 1055.99
   LOCATION L0001836     VOLUME   464960.214 3810534.108 1055.91
   LOCATION L0001837     VOLUME   464968.749 3810535.081 1055.81
   LOCATION L0001838     VOLUME   464977.283 3810536.054 1055.69
   LOCATION L0001839     VOLUME   464985.818 3810537.028 1055.51
   LOCATION L0001840     VOLUME   464994.353 3810538.001 1055.31
   LOCATION L0001841     VOLUME   465002.888 3810538.974 1055.13
   LOCATION L0001842     VOLUME   465011.460 3810539.392 1054.95
   LOCATION L0001843     VOLUME   465020.048 3810539.583 1054.66
   LOCATION L0001844     VOLUME   465028.636 3810539.773 1054.38
   LOCATION L0001845     VOLUME   465037.224 3810539.964 1054.09
   LOCATION L0001846     VOLUME   465045.812 3810540.155 1054.00
   LOCATION L0001847     VOLUME   465054.399 3810540.346 1054.00
   LOCATION L0001848     VOLUME   465062.987 3810540.537 1054.00
   LOCATION L0001849     VOLUME   465071.575 3810540.728 1054.00
** End of LINE VOLUME Source ID = SLINE3
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Palmetto 25%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.015E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
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** 465074.273, 3810540.960, 1054.00, 3.49, 4.00
** 465393.632, 3810538.463, 1050.25, 3.49, 4.00
** 465476.048, 3810539.087, 1049.15, 3.49, 4.00
** 465526.621, 3810547.516, 1048.15, 3.49, 4.00
** 465584.062, 3810564.374, 1048.05, 3.49, 4.00
** 465625.582, 3810584.665, 1047.09, 3.49, 4.00
** 465655.863, 3810603.708, 1046.23, 3.49, 4.00
** ------------------------------------------------------------------
   LOCATION L0001850     VOLUME   465078.568 3810540.927 1054.00
   LOCATION L0001851     VOLUME   465087.157 3810540.859 1054.00
   LOCATION L0001852     VOLUME   465095.747 3810540.792 1054.00
   LOCATION L0001853     VOLUME   465104.337 3810540.725 1053.85
   LOCATION L0001854     VOLUME   465112.927 3810540.658 1053.57
   LOCATION L0001855     VOLUME   465121.516 3810540.591 1053.28
   LOCATION L0001856     VOLUME   465130.106 3810540.524 1053.00
   LOCATION L0001857     VOLUME   465138.696 3810540.456 1053.00
   LOCATION L0001858     VOLUME   465147.286 3810540.389 1053.00
   LOCATION L0001859     VOLUME   465155.875 3810540.322 1053.00
   LOCATION L0001860     VOLUME   465164.465 3810540.255 1052.85
   LOCATION L0001861     VOLUME   465173.055 3810540.188 1052.56
   LOCATION L0001862     VOLUME   465181.645 3810540.121 1052.28
   LOCATION L0001863     VOLUME   465190.234 3810540.053 1052.00
   LOCATION L0001864     VOLUME   465198.824 3810539.986 1052.00
   LOCATION L0001865     VOLUME   465207.414 3810539.919 1052.00
   LOCATION L0001866     VOLUME   465216.003 3810539.852 1052.00
   LOCATION L0001867     VOLUME   465224.593 3810539.785 1052.00
   LOCATION L0001868     VOLUME   465233.183 3810539.717 1052.00
   LOCATION L0001869     VOLUME   465241.773 3810539.650 1052.00
   LOCATION L0001870     VOLUME   465250.362 3810539.583 1051.99
   LOCATION L0001871     VOLUME   465258.952 3810539.516 1051.86
   LOCATION L0001872     VOLUME   465267.542 3810539.449 1051.74
   LOCATION L0001873     VOLUME   465276.132 3810539.382 1051.61
   LOCATION L0001874     VOLUME   465284.721 3810539.314 1051.47
   LOCATION L0001875     VOLUME   465293.311 3810539.247 1051.31
   LOCATION L0001876     VOLUME   465301.901 3810539.180 1051.15
   LOCATION L0001877     VOLUME   465310.491 3810539.113 1050.99
   LOCATION L0001878     VOLUME   465319.080 3810539.046 1050.87
   LOCATION L0001879     VOLUME   465327.670 3810538.979 1050.74
   LOCATION L0001880     VOLUME   465336.260 3810538.911 1050.62
   LOCATION L0001881     VOLUME   465344.850 3810538.844 1050.57
   LOCATION L0001882     VOLUME   465353.439 3810538.777 1050.57
   LOCATION L0001883     VOLUME   465362.029 3810538.710 1050.57
   LOCATION L0001884     VOLUME   465370.619 3810538.643 1050.56
   LOCATION L0001885     VOLUME   465379.208 3810538.576 1050.40
   LOCATION L0001886     VOLUME   465387.798 3810538.508 1050.24
   LOCATION L0001887     VOLUME   465396.388 3810538.484 1050.07
   LOCATION L0001888     VOLUME   465404.978 3810538.549 1049.93
   LOCATION L0001889     VOLUME   465413.567 3810538.614 1049.81
   LOCATION L0001890     VOLUME   465422.157 3810538.679 1049.69
   LOCATION L0001891     VOLUME   465430.747 3810538.744 1049.56
   LOCATION L0001892     VOLUME   465439.337 3810538.809 1049.39
   LOCATION L0001893     VOLUME   465447.926 3810538.874 1049.23
   LOCATION L0001894     VOLUME   465456.516 3810538.939 1049.07
   LOCATION L0001895     VOLUME   465465.106 3810539.004 1049.00
   LOCATION L0001896     VOLUME   465473.696 3810539.069 1048.57
   LOCATION L0001897     VOLUME   465482.201 3810540.113 1048.54
   LOCATION L0001898     VOLUME   465490.674 3810541.525 1048.49
   LOCATION L0001899     VOLUME   465499.147 3810542.937 1048.44
   LOCATION L0001900     VOLUME   465507.620 3810544.349 1048.39
   LOCATION L0001901     VOLUME   465516.093 3810545.761 1048.35
   LOCATION L0001902     VOLUME   465524.566 3810547.174 1048.30
   LOCATION L0001903     VOLUME   465532.865 3810549.348 1048.23
   LOCATION L0001904     VOLUME   465541.107 3810551.767 1048.15
   LOCATION L0001905     VOLUME   465549.350 3810554.186 1048.07
   LOCATION L0001906     VOLUME   465557.592 3810556.605 1048.00
   LOCATION L0001907     VOLUME   465565.834 3810559.024 1047.95
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   LOCATION L0001908     VOLUME   465574.077 3810561.443 1047.86
   LOCATION L0001909     VOLUME   465582.319 3810563.862 1047.74
   LOCATION L0001910     VOLUME   465590.148 3810567.348 1047.63
   LOCATION L0001911     VOLUME   465597.865 3810571.120 1047.50
   LOCATION L0001912     VOLUME   465605.583 3810574.891 1047.38
   LOCATION L0001913     VOLUME   465613.300 3810578.663 1047.22
   LOCATION L0001914     VOLUME   465621.018 3810582.435 1047.08
   LOCATION L0001915     VOLUME   465628.554 3810586.534 1046.99
   LOCATION L0001916     VOLUME   465635.825 3810591.107 1046.84
   LOCATION L0001917     VOLUME   465643.097 3810595.680 1046.61
   LOCATION L0001918     VOLUME   465650.368 3810600.253 1046.34
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Amargosa 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 8.596E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 15
** 465655.863, 3810603.396, 1046.24, 3.49, 4.00
** 465689.891, 3810627.122, 1046.00, 3.49, 4.00
** 465695.510, 3810626.497, 1045.93, 3.49, 4.00
** 465710.807, 3810615.883, 1045.78, 3.49, 4.00
** 465636.508, 3810500.377, 1048.00, 3.49, 4.00
** 465492.906, 3810279.978, 1052.95, 3.49, 4.00
** 465332.757, 3810033.356, 1057.45, 3.49, 4.00
** 465230.050, 3809881.013, 1060.63, 3.49, 4.00
** 465189.155, 3809833.561, 1062.00, 3.49, 4.00
** 465169.175, 3809818.889, 1062.16, 3.49, 4.00
** 465142.016, 3809805.465, 1062.73, 3.49, 4.00
** 465116.729, 3809795.475, 1063.19, 3.49, 4.00
** 465093.004, 3809790.793, 1063.41, 3.49, 4.00
** 465023.075, 3809789.856, 1064.08, 3.49, 4.00
** 464946.904, 3809792.354, 1064.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001919     VOLUME   465659.386 3810605.853 1046.12
   LOCATION L0001920     VOLUME   465666.433 3810610.766 1046.02
   LOCATION L0001921     VOLUME   465673.479 3810615.679 1046.00
   LOCATION L0001922     VOLUME   465680.525 3810620.592 1045.85
   LOCATION L0001923     VOLUME   465687.572 3810625.505 1045.69
   LOCATION L0001924     VOLUME   465695.600 3810626.435 1045.66
   LOCATION L0001925     VOLUME   465702.657 3810621.538 1045.74
   LOCATION L0001926     VOLUME   465709.714 3810616.641 1045.66
   LOCATION L0001927     VOLUME   465706.879 3810609.777 1045.82
   LOCATION L0001928     VOLUME   465702.232 3810602.553 1045.96
   LOCATION L0001929     VOLUME   465697.585 3810595.328 1046.00
   LOCATION L0001930     VOLUME   465692.938 3810588.104 1046.00
   LOCATION L0001931     VOLUME   465688.291 3810580.879 1046.18
   LOCATION L0001932     VOLUME   465683.644 3810573.655 1046.42
   LOCATION L0001933     VOLUME   465678.997 3810566.430 1046.66
   LOCATION L0001934     VOLUME   465674.350 3810559.206 1046.90
   LOCATION L0001935     VOLUME   465669.703 3810551.982 1047.00
   LOCATION L0001936     VOLUME   465665.055 3810544.757 1047.06
   LOCATION L0001937     VOLUME   465660.408 3810537.533 1047.20
   LOCATION L0001938     VOLUME   465655.761 3810530.308 1047.40
   LOCATION L0001939     VOLUME   465651.114 3810523.084 1047.66
   LOCATION L0001940     VOLUME   465646.467 3810515.859 1047.85
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   LOCATION L0001942     VOLUME   465637.173 3810501.410 1048.00
   LOCATION L0001943     VOLUME   465632.490 3810494.209 1048.00
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   LOCATION L0001945     VOLUME   465623.111 3810479.815 1048.00
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    LOCATION L0001947     VOLUME   465613.732 3810465.421 1048.00
    LOCATION L0001948     VOLUME   465609.043 3810458.224 1048.02
    LOCATION L0001949     VOLUME   465604.354 3810451.027 1048.09
    LOCATION L0001950     VOLUME   465599.664 3810443.830 1048.09
    LOCATION L0001951     VOLUME   465594.975 3810436.633 1048.01
    LOCATION L0001952     VOLUME   465590.286 3810429.435 1048.15
    LOCATION L0001953     VOLUME   465585.596 3810422.238 1048.38
    LOCATION L0001954     VOLUME   465580.907 3810415.041 1048.68
    LOCATION L0001955     VOLUME   465576.218 3810407.844 1049.07
    LOCATION L0001956     VOLUME   465571.528 3810400.647 1049.41
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    LOCATION L0001958     VOLUME   465562.150 3810386.253 1049.86
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    LOCATION L0001962     VOLUME   465543.392 3810357.464 1050.84
    LOCATION L0001963     VOLUME   465538.703 3810350.267 1051.23
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    LOCATION L0001965     VOLUME   465529.324 3810335.873 1051.79
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    LOCATION L0001976     VOLUME   465477.778 3810256.682 1053.00
    LOCATION L0001977     VOLUME   465473.099 3810249.477 1053.22
    LOCATION L0001978     VOLUME   465468.421 3810242.273 1053.46
    LOCATION L0001979     VOLUME   465463.743 3810235.069 1053.70
    LOCATION L0001980     VOLUME   465459.065 3810227.864 1053.94
    LOCATION L0001981     VOLUME   465454.386 3810220.660 1054.00
    LOCATION L0001982     VOLUME   465449.708 3810213.456 1054.00
    LOCATION L0001983     VOLUME   465445.030 3810206.251 1054.00
    LOCATION L0001984     VOLUME   465440.352 3810199.047 1054.00
    LOCATION L0001985     VOLUME   465435.673 3810191.843 1054.11
    LOCATION L0001986     VOLUME   465430.995 3810184.638 1054.36
    LOCATION L0001987     VOLUME   465426.317 3810177.434 1054.62
    LOCATION L0001988     VOLUME   465421.639 3810170.230 1054.86
    LOCATION L0001989     VOLUME   465416.960 3810163.026 1055.04
    LOCATION L0001990     VOLUME   465412.282 3810155.821 1055.20
    LOCATION L0001991     VOLUME   465407.604 3810148.617 1055.43
    LOCATION L0001992     VOLUME   465402.926 3810141.413 1055.74
    LOCATION L0001993     VOLUME   465398.247 3810134.208 1056.00
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    LOCATION L0001997     VOLUME   465379.535 3810105.391 1056.01
    LOCATION L0001998     VOLUME   465374.856 3810098.187 1056.22
    LOCATION L0001999     VOLUME   465370.178 3810090.982 1056.50
    LOCATION L0002000     VOLUME   465365.500 3810083.778 1056.74
    LOCATION L0002001     VOLUME   465360.822 3810076.574 1056.98
    LOCATION L0002002     VOLUME   465356.143 3810069.369 1057.00
    LOCATION L0002003     VOLUME   465351.465 3810062.165 1057.00
    LOCATION L0002004     VOLUME   465346.787 3810054.961 1057.00
    LOCATION L0002005     VOLUME   465342.109 3810047.757 1057.00
    LOCATION L0002006     VOLUME   465337.430 3810040.552 1057.25
    LOCATION L0002007     VOLUME   465332.752 3810033.348 1057.56
    LOCATION L0002008     VOLUME   465327.950 3810026.225 1057.79
    LOCATION L0002009     VOLUME   465323.148 3810019.103 1057.95
    LOCATION L0002010     VOLUME   465318.346 3810011.980 1058.00
    LOCATION L0002011     VOLUME   465313.544 3810004.858 1058.00
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331      LOCATION L0002013     VOLUME   465303.941 3809990.613 1058.17
332      LOCATION L0002014     VOLUME   465299.139 3809983.490 1058.41
333      LOCATION L0002015     VOLUME   465294.337 3809976.368 1058.67
334      LOCATION L0002016     VOLUME   465289.535 3809969.245 1058.86
335      LOCATION L0002017     VOLUME   465284.733 3809962.123 1058.97
336      LOCATION L0002018     VOLUME   465279.931 3809955.000 1059.03
337      LOCATION L0002019     VOLUME   465275.130 3809947.878 1059.39
338      LOCATION L0002020     VOLUME   465270.328 3809940.755 1059.67
339      LOCATION L0002021     VOLUME   465265.526 3809933.633 1059.87
340      LOCATION L0002022     VOLUME   465260.724 3809926.510 1059.99
341      LOCATION L0002023     VOLUME   465255.922 3809919.388 1060.18
342      LOCATION L0002024     VOLUME   465251.120 3809912.265 1060.44
343      LOCATION L0002025     VOLUME   465246.318 3809905.143 1060.61
344      LOCATION L0002026     VOLUME   465241.517 3809898.020 1060.67
345      LOCATION L0002027     VOLUME   465236.715 3809890.898 1060.63
346      LOCATION L0002028     VOLUME   465231.913 3809883.775 1060.64
347      LOCATION L0002029     VOLUME   465226.618 3809877.029 1060.71
348      LOCATION L0002030     VOLUME   465221.010 3809870.523 1060.85
349      LOCATION L0002031     VOLUME   465215.402 3809864.016 1061.06
350      LOCATION L0002032     VOLUME   465209.794 3809857.509 1061.28
351      LOCATION L0002033     VOLUME   465204.186 3809851.002 1061.50
352      LOCATION L0002034     VOLUME   465198.578 3809844.495 1061.72
353      LOCATION L0002035     VOLUME   465192.970 3809837.988 1061.93
354      LOCATION L0002036     VOLUME   465186.942 3809831.936 1062.00
355      LOCATION L0002037     VOLUME   465180.018 3809826.852 1062.00
356      LOCATION L0002038     VOLUME   465173.095 3809821.767 1062.00
357      LOCATION L0002039     VOLUME   465165.834 3809817.237 1062.00
358      LOCATION L0002040     VOLUME   465158.133 3809813.431 1062.05
359      LOCATION L0002041     VOLUME   465150.432 3809809.625 1062.28
360      LOCATION L0002042     VOLUME   465142.731 3809805.819 1062.58
361      LOCATION L0002043     VOLUME   465134.769 3809802.602 1062.86
362      LOCATION L0002044     VOLUME   465126.780 3809799.446 1063.02
363      LOCATION L0002045     VOLUME   465118.791 3809796.290 1063.12
364      LOCATION L0002046     VOLUME   465110.476 3809794.241 1063.25
365      LOCATION L0002047     VOLUME   465102.049 3809792.578 1063.41
366      LOCATION L0002048     VOLUME   465093.622 3809790.915 1063.50
367      LOCATION L0002049     VOLUME   465085.044 3809790.686 1063.51
368      LOCATION L0002050     VOLUME   465076.455 3809790.571 1063.51
369      LOCATION L0002051     VOLUME   465067.866 3809790.456 1063.52
370      LOCATION L0002052     VOLUME   465059.277 3809790.341 1063.52
371      LOCATION L0002053     VOLUME   465050.687 3809790.226 1063.52
372      LOCATION L0002054     VOLUME   465042.098 3809790.111 1063.53
373      LOCATION L0002055     VOLUME   465033.509 3809789.996 1063.63
374      LOCATION L0002056     VOLUME   465024.920 3809789.881 1063.77
375      LOCATION L0002057     VOLUME   465016.333 3809790.077 1063.90
376      LOCATION L0002058     VOLUME   465007.748 3809790.359 1064.00
377      LOCATION L0002059     VOLUME   464999.163 3809790.640 1064.00
378      LOCATION L0002060     VOLUME   464990.577 3809790.922 1064.00
379      LOCATION L0002061     VOLUME   464981.992 3809791.203 1064.00
380      LOCATION L0002062     VOLUME   464973.407 3809791.485 1064.00
381      LOCATION L0002063     VOLUME   464964.821 3809791.766 1064.00
382      LOCATION L0002064     VOLUME   464956.236 3809792.048 1064.00
383      LOCATION L0002065     VOLUME   464947.650 3809792.329 1064.04
384    ** End of LINE VOLUME Source ID = SLINE5
385    ** ----------------------------------------------------------------------
386    ** Line Source Represented by Adjacent Volume Sources
387    ** LINE VOLUME Source ID = SLINE6
388    ** DESCRSRC Main 100%
389    ** PREFIX
390    ** Length of Side = 14.00
391    ** Configuration = Adjacent
392    ** Emission Rate = 6.335E-06
393    ** Vertical Dimension = 6.99
394    ** SZINIT = 3.25
395    ** Nodes = 9
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** 464737.119, 3809533.869, 1070.00, 3.49, 6.51
** 464839.826, 3809535.430, 1069.12, 3.49, 6.51
** 464953.147, 3809541.673, 1068.06, 3.49, 6.51
** 465010.276, 3809542.298, 1068.03, 3.49, 6.51
** 465066.781, 3809543.547, 1068.00, 3.49, 6.51
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   LOCATION L0002070     VOLUME   464883.904 3809792.572 1065.00
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   LOCATION L0002073     VOLUME   464841.904 3809792.510 1065.27
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   LOCATION L0002075     VOLUME   464813.904 3809792.468 1065.74
   LOCATION L0002076     VOLUME   464799.904 3809792.447 1066.00
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   LOCATION L0002080     VOLUME   464743.904 3809792.364 1066.39
   LOCATION L0002081     VOLUME   464736.815 3809785.451 1066.72
   LOCATION L0002082     VOLUME   464736.832 3809771.451 1067.00
   LOCATION L0002083     VOLUME   464736.849 3809757.451 1067.00
   LOCATION L0002084     VOLUME   464736.866 3809743.451 1067.01
   LOCATION L0002085     VOLUME   464736.883 3809729.451 1067.06
   LOCATION L0002086     VOLUME   464736.900 3809715.451 1067.12
   LOCATION L0002087     VOLUME   464736.916 3809701.451 1067.54
   LOCATION L0002088     VOLUME   464736.933 3809687.451 1067.95
   LOCATION L0002089     VOLUME   464736.950 3809673.451 1068.00
   LOCATION L0002090     VOLUME   464736.967 3809659.451 1068.00
   LOCATION L0002091     VOLUME   464736.984 3809645.451 1068.35
   LOCATION L0002092     VOLUME   464737.001 3809631.451 1068.82
   LOCATION L0002093     VOLUME   464737.018 3809617.451 1069.03
   LOCATION L0002094     VOLUME   464737.035 3809603.451 1069.07
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   LOCATION L0002101     VOLUME   464765.534 3809534.301 1070.00
   LOCATION L0002102     VOLUME   464779.532 3809534.514 1070.00
   LOCATION L0002103     VOLUME   464793.530 3809534.726 1070.00
   LOCATION L0002104     VOLUME   464807.529 3809534.939 1069.76
   LOCATION L0002105     VOLUME   464821.527 3809535.152 1069.30
   LOCATION L0002106     VOLUME   464835.526 3809535.364 1069.02
   LOCATION L0002107     VOLUME   464849.510 3809535.963 1069.00
   LOCATION L0002108     VOLUME   464863.489 3809536.734 1068.97
   LOCATION L0002109     VOLUME   464877.468 3809537.504 1068.95
   LOCATION L0002110     VOLUME   464891.447 3809538.274 1068.92
   LOCATION L0002111     VOLUME   464905.426 3809539.044 1068.90
   LOCATION L0002112     VOLUME   464919.404 3809539.814 1068.87
   LOCATION L0002113     VOLUME   464933.383 3809540.585 1068.47
   LOCATION L0002114     VOLUME   464947.362 3809541.355 1068.07
   LOCATION L0002115     VOLUME   464961.353 3809541.763 1068.00
   LOCATION L0002116     VOLUME   464975.352 3809541.916 1068.00
   LOCATION L0002117     VOLUME   464989.351 3809542.069 1068.00
   LOCATION L0002118     VOLUME   465003.350 3809542.222 1068.00
   LOCATION L0002119     VOLUME   465017.348 3809542.454 1068.00
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   LOCATION L0002121     VOLUME   465045.341 3809543.073 1067.96
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   LOCATION L0002124     VOLUME   465087.328 3809542.967 1067.77
   LOCATION L0002125     VOLUME   465101.322 3809542.572 1067.78
   LOCATION L0002126     VOLUME   465115.317 3809542.177 1067.79
   LOCATION L0002127     VOLUME   465129.311 3809541.782 1067.81
   LOCATION L0002128     VOLUME   465143.306 3809541.387 1067.82
   LOCATION L0002129     VOLUME   465157.284 3809540.624 1067.84
   LOCATION L0002130     VOLUME   465171.262 3809539.836 1067.54
   LOCATION L0002131     VOLUME   465185.240 3809539.049 1067.14
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC Onsite 75%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.242E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
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** 465588.071, 3810613.170, 1046.88, 3.49, 4.00
** 465554.367, 3810591.133, 1047.94, 3.49, 4.00
** 465540.972, 3810585.516, 1047.96, 3.49, 4.00
** 465521.528, 3810584.652, 1048.00, 3.49, 4.00
** 465480.911, 3810584.652, 1048.00, 3.49, 4.00
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   LOCATION L0001735     VOLUME   465637.572 3810625.533 1046.00
   LOCATION L0001736     VOLUME   465631.972 3810632.047 1046.00
   LOCATION L0001737     VOLUME   465626.373 3810638.561 1046.00
   LOCATION L0001738     VOLUME   465619.837 3810636.714 1046.00
   LOCATION L0001739     VOLUME   465612.936 3810631.599 1046.00
   LOCATION L0001740     VOLUME   465606.035 3810626.485 1046.08
   LOCATION L0001741     VOLUME   465599.134 3810621.370 1046.29
   LOCATION L0001742     VOLUME   465592.233 3810616.255 1046.59
   LOCATION L0001743     VOLUME   465585.217 3810611.304 1046.85
   LOCATION L0001744     VOLUME   465578.028 3810606.603 1047.02
   LOCATION L0001745     VOLUME   465570.838 3810601.902 1047.14
   LOCATION L0001746     VOLUME   465563.649 3810597.201 1047.34
   LOCATION L0001747     VOLUME   465556.459 3810592.501 1047.61
   LOCATION L0001748     VOLUME   465548.750 3810588.777 1047.91
   LOCATION L0001749     VOLUME   465540.817 3810585.509 1048.00
   LOCATION L0001750     VOLUME   465532.235 3810585.127 1048.00
   LOCATION L0001751     VOLUME   465523.654 3810584.746 1048.00
   LOCATION L0001752     VOLUME   465515.066 3810584.652 1048.00
   LOCATION L0001753     VOLUME   465506.476 3810584.652 1048.00
   LOCATION L0001754     VOLUME   465497.886 3810584.652 1048.00
   LOCATION L0001755     VOLUME   465489.296 3810584.652 1048.00
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Onsite 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 5.378E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 465136.099, 3810585.516, 1052.94, 3.49, 4.00
** 465483.504, 3810584.652, 1048.00, 3.49, 4.00
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   LOCATION L0001758     VOLUME   465157.574 3810585.462 1052.09
   LOCATION L0001759     VOLUME   465166.164 3810585.441 1052.01
   LOCATION L0001760     VOLUME   465174.754 3810585.420 1052.01
   LOCATION L0001761     VOLUME   465183.344 3810585.398 1052.00
   LOCATION L0001762     VOLUME   465191.934 3810585.377 1052.00
   LOCATION L0001763     VOLUME   465200.524 3810585.355 1052.00
   LOCATION L0001764     VOLUME   465209.114 3810585.334 1052.00
   LOCATION L0001765     VOLUME   465217.704 3810585.313 1052.00
   LOCATION L0001766     VOLUME   465226.294 3810585.291 1051.79
   LOCATION L0001767     VOLUME   465234.884 3810585.270 1051.51
   LOCATION L0001768     VOLUME   465243.474 3810585.249 1051.24
   LOCATION L0001769     VOLUME   465252.064 3810585.227 1051.02
   LOCATION L0001770     VOLUME   465260.653 3810585.206 1051.02
   LOCATION L0001771     VOLUME   465269.243 3810585.185 1051.01
   LOCATION L0001772     VOLUME   465277.833 3810585.163 1051.00
   LOCATION L0001773     VOLUME   465286.423 3810585.142 1050.79
   LOCATION L0001774     VOLUME   465295.013 3810585.120 1050.51
   LOCATION L0001775     VOLUME   465303.603 3810585.099 1050.23
   LOCATION L0001776     VOLUME   465312.193 3810585.078 1050.03
   LOCATION L0001777     VOLUME   465320.783 3810585.056 1050.02
   LOCATION L0001778     VOLUME   465329.373 3810585.035 1050.01
   LOCATION L0001779     VOLUME   465337.963 3810585.014 1050.00
   LOCATION L0001780     VOLUME   465346.553 3810584.992 1050.00
   LOCATION L0001781     VOLUME   465355.143 3810584.971 1050.00
   LOCATION L0001782     VOLUME   465363.733 3810584.949 1050.00
   LOCATION L0001783     VOLUME   465372.323 3810584.928 1049.92
   LOCATION L0001784     VOLUME   465380.913 3810584.907 1049.65
   LOCATION L0001785     VOLUME   465389.503 3810584.885 1049.37
   LOCATION L0001786     VOLUME   465398.093 3810584.864 1049.10
   LOCATION L0001787     VOLUME   465406.683 3810584.843 1049.03
   LOCATION L0001788     VOLUME   465415.273 3810584.821 1049.02
   LOCATION L0001789     VOLUME   465423.863 3810584.800 1049.01
   LOCATION L0001790     VOLUME   465432.453 3810584.779 1048.92
   LOCATION L0001791     VOLUME   465441.043 3810584.757 1048.65
   LOCATION L0001792     VOLUME   465449.633 3810584.736 1048.37
   LOCATION L0001793     VOLUME   465458.223 3810584.714 1048.10
   LOCATION L0001794     VOLUME   465466.813 3810584.693 1048.00
   LOCATION L0001795     VOLUME   465475.403 3810584.672 1048.00
** End of LINE VOLUME Source ID = SLINE8
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Onsite 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.831E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
** 464941.656, 3810586.812, 1055.17, 3.49, 4.00
** 464942.520, 3810557.862, 1055.97, 3.49, 4.00
** 464946.409, 3810544.467, 1055.93, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001796     VOLUME   465130.940 3810585.544 1052.97
   LOCATION L0001797     VOLUME   465122.350 3810585.602 1053.00
   LOCATION L0001798     VOLUME   465113.760 3810585.660 1053.01
   LOCATION L0001799     VOLUME   465105.170 3810585.717 1053.01
   LOCATION L0001800     VOLUME   465096.581 3810585.775 1053.12
   LOCATION L0001801     VOLUME   465087.991 3810585.832 1053.40
   LOCATION L0001802     VOLUME   465079.401 3810585.890 1053.69
   LOCATION L0001803     VOLUME   465070.811 3810585.947 1053.97
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   LOCATION L0001804     VOLUME   465062.221 3810586.005 1054.00
   LOCATION L0001805     VOLUME   465053.632 3810586.062 1054.00
   LOCATION L0001806     VOLUME   465045.042 3810586.120 1054.00
   LOCATION L0001807     VOLUME   465036.452 3810586.177 1054.12
   LOCATION L0001808     VOLUME   465027.862 3810586.235 1054.40
   LOCATION L0001809     VOLUME   465019.272 3810586.292 1054.68
   LOCATION L0001810     VOLUME   465010.682 3810586.350 1054.96
   LOCATION L0001811     VOLUME   465002.093 3810586.407 1054.99
   LOCATION L0001812     VOLUME   464993.503 3810586.465 1054.99
   LOCATION L0001813     VOLUME   464984.913 3810586.522 1055.00
   LOCATION L0001814     VOLUME   464976.323 3810586.580 1055.00
   LOCATION L0001815     VOLUME   464967.733 3810586.637 1055.00
   LOCATION L0001816     VOLUME   464959.144 3810586.695 1055.00
   LOCATION L0001817     VOLUME   464950.554 3810586.752 1055.00
   LOCATION L0001818     VOLUME   464941.964 3810586.810 1055.26
   LOCATION L0001819     VOLUME   464941.903 3810578.534 1055.45
   LOCATION L0001820     VOLUME   464942.159 3810569.948 1055.65
   LOCATION L0001821     VOLUME   464942.416 3810561.362 1055.86
   LOCATION L0001822     VOLUME   464943.939 3810552.975 1056.00
   LOCATION L0001823     VOLUME   464946.334 3810544.725 1056.00
** End of LINE VOLUME Source ID = SLINE9
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Onsite 20%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.904E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 465073.877, 3810553.973, 1054.00, 3.49, 4.00
** 465073.445, 3810585.948, 1053.98, 3.49, 4.00
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0001824     VOLUME   465073.819 3810558.267 1053.99
   LOCATION L0001825     VOLUME   465073.703 3810566.857 1053.95
   LOCATION L0001826     VOLUME   465073.587 3810575.446 1053.92
   LOCATION L0001827     VOLUME   465073.471 3810584.035 1053.89
   LOCATION L0001828     VOLUME   465080.122 3810585.901 1053.66
   LOCATION L0001829     VOLUME   465088.712 3810585.841 1053.38
   LOCATION L0001830     VOLUME   465097.301 3810585.781 1053.09
   LOCATION L0001831     VOLUME   465105.891 3810585.721 1053.01
   LOCATION L0001832     VOLUME   465114.481 3810585.661 1053.00
   LOCATION L0001833     VOLUME   465123.071 3810585.601 1053.00
   LOCATION L0001834     VOLUME   465131.661 3810585.541 1052.94
** End of LINE VOLUME Source ID = SLINE10
   LOCATION STCK1        POINT      465521.650  3810719.260     1045.560
** DESCRSRC Fire Pump
   LOCATION STCK2        POINT      465515.495  3810718.939     1045.640
** DESCRSRC Emergency Generator
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0001397     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001398     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001399     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001400     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001401     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001402     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001403     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001404     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001405     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001406     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001407     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001408     0.0000003422      3.49      4.00      3.25
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   SRCPARAM L0001409     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001410     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001411     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001412     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001413     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001414     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001415     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001416     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001417     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001418     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001419     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001420     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001421     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001422     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001423     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001424     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001425     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001426     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001427     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001428     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001429     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001430     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001431     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001432     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001433     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001434     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001435     0.0000003422      3.49      4.00      3.25
   SRCPARAM L0001436     0.0000003422      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0001835     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001836     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001837     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001838     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001839     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001840     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001841     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001842     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001843     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001844     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001845     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001846     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001847     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001848     0.00000000289      3.49      4.00      3.25
   SRCPARAM L0001849     0.00000000289      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0001850     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001851     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001852     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001853     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001854     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001855     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001856     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001857     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001858     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001859     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001860     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001861     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001862     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001863     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001864     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001865     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001866     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001867     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001868     0.00000001471      3.49      4.00      3.25
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   SRCPARAM L0001869     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001870     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001871     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001872     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001873     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001874     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001875     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001876     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001877     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001878     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001879     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001880     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001881     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001882     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001883     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001884     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001885     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001886     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001887     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001888     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001889     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001890     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001891     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001892     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001893     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001894     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001895     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001896     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001897     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001898     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001899     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001900     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001901     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001902     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001903     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001904     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001905     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001906     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001907     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001908     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001909     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001910     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001911     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001912     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001913     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001914     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001915     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001916     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001917     0.00000001471      3.49      4.00      3.25
   SRCPARAM L0001918     0.00000001471      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0001919     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001920     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001921     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001922     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001923     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001924     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001925     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001926     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001927     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001928     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001929     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001930     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001931     0.00000005848      3.49      4.00      3.25
   SRCPARAM L0001932     0.00000005848      3.49      4.00      3.25
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792      SRCPARAM L0001933     0.00000005848      3.49      4.00      3.25
793      SRCPARAM L0001934     0.00000005848      3.49      4.00      3.25
794      SRCPARAM L0001935     0.00000005848      3.49      4.00      3.25
795      SRCPARAM L0001936     0.00000005848      3.49      4.00      3.25
796      SRCPARAM L0001937     0.00000005848      3.49      4.00      3.25
797      SRCPARAM L0001938     0.00000005848      3.49      4.00      3.25
798      SRCPARAM L0001939     0.00000005848      3.49      4.00      3.25
799      SRCPARAM L0001940     0.00000005848      3.49      4.00      3.25
800      SRCPARAM L0001941     0.00000005848      3.49      4.00      3.25
801      SRCPARAM L0001942     0.00000005848      3.49      4.00      3.25
802      SRCPARAM L0001943     0.00000005848      3.49      4.00      3.25
803      SRCPARAM L0001944     0.00000005848      3.49      4.00      3.25
804      SRCPARAM L0001945     0.00000005848      3.49      4.00      3.25
805      SRCPARAM L0001946     0.00000005848      3.49      4.00      3.25
806      SRCPARAM L0001947     0.00000005848      3.49      4.00      3.25
807      SRCPARAM L0001948     0.00000005848      3.49      4.00      3.25
808      SRCPARAM L0001949     0.00000005848      3.49      4.00      3.25
809      SRCPARAM L0001950     0.00000005848      3.49      4.00      3.25
810      SRCPARAM L0001951     0.00000005848      3.49      4.00      3.25
811      SRCPARAM L0001952     0.00000005848      3.49      4.00      3.25
812      SRCPARAM L0001953     0.00000005848      3.49      4.00      3.25
813      SRCPARAM L0001954     0.00000005848      3.49      4.00      3.25
814      SRCPARAM L0001955     0.00000005848      3.49      4.00      3.25
815      SRCPARAM L0001956     0.00000005848      3.49      4.00      3.25
816      SRCPARAM L0001957     0.00000005848      3.49      4.00      3.25
817      SRCPARAM L0001958     0.00000005848      3.49      4.00      3.25
818      SRCPARAM L0001959     0.00000005848      3.49      4.00      3.25
819      SRCPARAM L0001960     0.00000005848      3.49      4.00      3.25
820      SRCPARAM L0001961     0.00000005848      3.49      4.00      3.25
821      SRCPARAM L0001962     0.00000005848      3.49      4.00      3.25
822      SRCPARAM L0001963     0.00000005848      3.49      4.00      3.25
823      SRCPARAM L0001964     0.00000005848      3.49      4.00      3.25
824      SRCPARAM L0001965     0.00000005848      3.49      4.00      3.25
825      SRCPARAM L0001966     0.00000005848      3.49      4.00      3.25
826      SRCPARAM L0001967     0.00000005848      3.49      4.00      3.25
827      SRCPARAM L0001968     0.00000005848      3.49      4.00      3.25
828      SRCPARAM L0001969     0.00000005848      3.49      4.00      3.25
829      SRCPARAM L0001970     0.00000005848      3.49      4.00      3.25
830      SRCPARAM L0001971     0.00000005848      3.49      4.00      3.25
831      SRCPARAM L0001972     0.00000005848      3.49      4.00      3.25
832      SRCPARAM L0001973     0.00000005848      3.49      4.00      3.25
833      SRCPARAM L0001974     0.00000005848      3.49      4.00      3.25
834      SRCPARAM L0001975     0.00000005848      3.49      4.00      3.25
835      SRCPARAM L0001976     0.00000005848      3.49      4.00      3.25
836      SRCPARAM L0001977     0.00000005848      3.49      4.00      3.25
837      SRCPARAM L0001978     0.00000005848      3.49      4.00      3.25
838      SRCPARAM L0001979     0.00000005848      3.49      4.00      3.25
839      SRCPARAM L0001980     0.00000005848      3.49      4.00      3.25
840      SRCPARAM L0001981     0.00000005848      3.49      4.00      3.25
841      SRCPARAM L0001982     0.00000005848      3.49      4.00      3.25
842      SRCPARAM L0001983     0.00000005848      3.49      4.00      3.25
843      SRCPARAM L0001984     0.00000005848      3.49      4.00      3.25
844      SRCPARAM L0001985     0.00000005848      3.49      4.00      3.25
845      SRCPARAM L0001986     0.00000005848      3.49      4.00      3.25
846      SRCPARAM L0001987     0.00000005848      3.49      4.00      3.25
847      SRCPARAM L0001988     0.00000005848      3.49      4.00      3.25
848      SRCPARAM L0001989     0.00000005848      3.49      4.00      3.25
849      SRCPARAM L0001990     0.00000005848      3.49      4.00      3.25
850      SRCPARAM L0001991     0.00000005848      3.49      4.00      3.25
851      SRCPARAM L0001992     0.00000005848      3.49      4.00      3.25
852      SRCPARAM L0001993     0.00000005848      3.49      4.00      3.25
853      SRCPARAM L0001994     0.00000005848      3.49      4.00      3.25
854      SRCPARAM L0001995     0.00000005848      3.49      4.00      3.25
855      SRCPARAM L0001996     0.00000005848      3.49      4.00      3.25
856      SRCPARAM L0001997     0.00000005848      3.49      4.00      3.25
857      SRCPARAM L0001998     0.00000005848      3.49      4.00      3.25
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858      SRCPARAM L0001999     0.00000005848      3.49      4.00      3.25
859      SRCPARAM L0002000     0.00000005848      3.49      4.00      3.25
860      SRCPARAM L0002001     0.00000005848      3.49      4.00      3.25
861      SRCPARAM L0002002     0.00000005848      3.49      4.00      3.25
862      SRCPARAM L0002003     0.00000005848      3.49      4.00      3.25
863      SRCPARAM L0002004     0.00000005848      3.49      4.00      3.25
864      SRCPARAM L0002005     0.00000005848      3.49      4.00      3.25
865      SRCPARAM L0002006     0.00000005848      3.49      4.00      3.25
866      SRCPARAM L0002007     0.00000005848      3.49      4.00      3.25
867      SRCPARAM L0002008     0.00000005848      3.49      4.00      3.25
868      SRCPARAM L0002009     0.00000005848      3.49      4.00      3.25
869      SRCPARAM L0002010     0.00000005848      3.49      4.00      3.25
870      SRCPARAM L0002011     0.00000005848      3.49      4.00      3.25
871      SRCPARAM L0002012     0.00000005848      3.49      4.00      3.25
872      SRCPARAM L0002013     0.00000005848      3.49      4.00      3.25
873      SRCPARAM L0002014     0.00000005848      3.49      4.00      3.25
874      SRCPARAM L0002015     0.00000005848      3.49      4.00      3.25
875      SRCPARAM L0002016     0.00000005848      3.49      4.00      3.25
876      SRCPARAM L0002017     0.00000005848      3.49      4.00      3.25
877      SRCPARAM L0002018     0.00000005848      3.49      4.00      3.25
878      SRCPARAM L0002019     0.00000005848      3.49      4.00      3.25
879      SRCPARAM L0002020     0.00000005848      3.49      4.00      3.25
880      SRCPARAM L0002021     0.00000005848      3.49      4.00      3.25
881      SRCPARAM L0002022     0.00000005848      3.49      4.00      3.25
882      SRCPARAM L0002023     0.00000005848      3.49      4.00      3.25
883      SRCPARAM L0002024     0.00000005848      3.49      4.00      3.25
884      SRCPARAM L0002025     0.00000005848      3.49      4.00      3.25
885      SRCPARAM L0002026     0.00000005848      3.49      4.00      3.25
886      SRCPARAM L0002027     0.00000005848      3.49      4.00      3.25
887      SRCPARAM L0002028     0.00000005848      3.49      4.00      3.25
888      SRCPARAM L0002029     0.00000005848      3.49      4.00      3.25
889      SRCPARAM L0002030     0.00000005848      3.49      4.00      3.25
890      SRCPARAM L0002031     0.00000005848      3.49      4.00      3.25
891      SRCPARAM L0002032     0.00000005848      3.49      4.00      3.25
892      SRCPARAM L0002033     0.00000005848      3.49      4.00      3.25
893      SRCPARAM L0002034     0.00000005848      3.49      4.00      3.25
894      SRCPARAM L0002035     0.00000005848      3.49      4.00      3.25
895      SRCPARAM L0002036     0.00000005848      3.49      4.00      3.25
896      SRCPARAM L0002037     0.00000005848      3.49      4.00      3.25
897      SRCPARAM L0002038     0.00000005848      3.49      4.00      3.25
898      SRCPARAM L0002039     0.00000005848      3.49      4.00      3.25
899      SRCPARAM L0002040     0.00000005848      3.49      4.00      3.25
900      SRCPARAM L0002041     0.00000005848      3.49      4.00      3.25
901      SRCPARAM L0002042     0.00000005848      3.49      4.00      3.25
902      SRCPARAM L0002043     0.00000005848      3.49      4.00      3.25
903      SRCPARAM L0002044     0.00000005848      3.49      4.00      3.25
904      SRCPARAM L0002045     0.00000005848      3.49      4.00      3.25
905      SRCPARAM L0002046     0.00000005848      3.49      4.00      3.25
906      SRCPARAM L0002047     0.00000005848      3.49      4.00      3.25
907      SRCPARAM L0002048     0.00000005848      3.49      4.00      3.25
908      SRCPARAM L0002049     0.00000005848      3.49      4.00      3.25
909      SRCPARAM L0002050     0.00000005848      3.49      4.00      3.25
910      SRCPARAM L0002051     0.00000005848      3.49      4.00      3.25
911      SRCPARAM L0002052     0.00000005848      3.49      4.00      3.25
912      SRCPARAM L0002053     0.00000005848      3.49      4.00      3.25
913      SRCPARAM L0002054     0.00000005848      3.49      4.00      3.25
914      SRCPARAM L0002055     0.00000005848      3.49      4.00      3.25
915      SRCPARAM L0002056     0.00000005848      3.49      4.00      3.25
916      SRCPARAM L0002057     0.00000005848      3.49      4.00      3.25
917      SRCPARAM L0002058     0.00000005848      3.49      4.00      3.25
918      SRCPARAM L0002059     0.00000005848      3.49      4.00      3.25
919      SRCPARAM L0002060     0.00000005848      3.49      4.00      3.25
920      SRCPARAM L0002061     0.00000005848      3.49      4.00      3.25
921      SRCPARAM L0002062     0.00000005848      3.49      4.00      3.25
922      SRCPARAM L0002063     0.00000005848      3.49      4.00      3.25
923      SRCPARAM L0002064     0.00000005848      3.49      4.00      3.25
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   SRCPARAM L0002065     0.00000005848      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0002066     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002067     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002068     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002069     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002070     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002071     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002072     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002073     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002074     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002075     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002076     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002077     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002078     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002079     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002080     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002081     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002082     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002083     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002084     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002085     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002086     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002087     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002088     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002089     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002090     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002091     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002092     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002093     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002094     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002095     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002096     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002097     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002098     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002099     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002100     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002101     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002102     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002103     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002104     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002105     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002106     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002107     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002108     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002109     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002110     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002111     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002112     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002113     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002114     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002115     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002116     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002117     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002118     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002119     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002120     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002121     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002122     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002123     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002124     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002125     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002126     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002127     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002128     0.00000009598      3.49      6.51      3.25
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   SRCPARAM L0002129     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002130     0.00000009598      3.49      6.51      3.25
   SRCPARAM L0002131     0.00000009598      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0001734     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001735     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001736     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001737     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001738     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001739     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001740     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001741     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001742     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001743     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001744     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001745     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001746     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001747     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001748     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001749     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001750     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001751     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001752     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001753     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001754     0.0000001019      3.49      4.00      3.25
   SRCPARAM L0001755     0.0000001019      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0001756     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001757     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001758     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001759     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001760     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001761     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001762     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001763     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001764     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001765     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001766     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001767     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001768     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001769     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001770     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001771     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001772     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001773     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001774     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001775     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001776     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001777     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001778     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001779     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001780     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001781     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001782     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001783     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001784     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001785     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001786     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001787     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001788     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001789     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001790     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001791     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001792     0.0000001344      3.49      4.00      3.25
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   SRCPARAM L0001793     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001794     0.0000001344      3.49      4.00      3.25
   SRCPARAM L0001795     0.0000001344      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0001796     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001797     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001798     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001799     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001800     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001801     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001802     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001803     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001804     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001805     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001806     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001807     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001808     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001809     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001810     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001811     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001812     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001813     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001814     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001815     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001816     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001817     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001818     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001819     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001820     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001821     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001822     0.000000006539      3.49      4.00      3.25
   SRCPARAM L0001823     0.000000006539      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0001824     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001825     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001826     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001827     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001828     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001829     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001830     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001831     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001832     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001833     0.0000000264      3.49      4.00      3.25
   SRCPARAM L0001834     0.0000000264      3.49      4.00      3.25
** ------------------------------------------------------------------
   SRCPARAM STCK1           0.0125     3.550   728.550     54.78      0.13
   SRCPARAM STCK2        0.029166667     3.840   798.160    160.56      0.17

** Building Downwash **
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK1          14.63    14.63    14.63    14.63    14.63    14.63

   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63
   BUILDHGT STCK2          14.63    14.63    14.63    14.63    14.63    14.63

   BUILDWID STCK1         438.73   440.26   428.41   403.54   366.40   318.14
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     BUILDWID STCK1          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK1          368.21   404.96   429.41   440.81   438.82   425.78
     BUILDWID STCK1          438.73   440.26   428.41   403.54   366.40   318.14
     BUILDWID STCK1          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK1          368.21   404.96   429.41   440.81   438.82   425.78

     BUILDWID STCK2          438.73   440.26   428.41   403.54   366.40   318.14
     BUILDWID STCK2          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK2          368.21   404.96   429.41   440.81   438.82   425.78
     BUILDWID STCK2          438.73   440.26   428.41   403.54   366.40   318.14
     BUILDWID STCK2          260.21   194.37   127.97   196.94   262.59   320.26
     BUILDWID STCK2          368.21   404.96   429.41   440.81   438.82   425.78

     BUILDLEN STCK1          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK1          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK1          403.54   366.40   318.14   260.21   194.37   127.97
     BUILDLEN STCK1          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK1          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK1          403.54   366.40   318.14   260.21   194.37   127.97

     BUILDLEN STCK2          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK2          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK2          403.54   366.40   318.14   260.21   194.37   127.97
     BUILDLEN STCK2          196.94   262.59   320.26   368.21   404.96   429.41
     BUILDLEN STCK2          440.81   438.82   425.78   438.73   440.26   428.41
     BUILDLEN STCK2          403.54   366.40   318.14   260.21   194.37   127.97

     XBADJ    STCK1         -191.22  -256.13  -313.25  -360.86  -397.50  -422.07
     XBADJ    STCK1         -433.81  -432.37  -419.69  -413.82  -395.37  -364.91
     XBADJ    STCK1         -323.36  -271.99  -212.35  -146.26   -75.72    -4.80
     XBADJ    STCK1           -5.72    -6.46    -7.01    -7.35    -7.46    -7.35
     XBADJ    STCK1           -7.01    -6.46    -6.09   -24.92   -44.89   -63.50
     XBADJ    STCK1          -80.18   -94.42  -105.79  -113.95  -118.65  -123.17

     XBADJ    STCK2         -189.83  -253.72  -309.89  -356.65  -392.58  -416.57
     XBADJ    STCK2         -427.91  -426.25  -413.53  -407.80  -389.69  -359.73
     XBADJ    STCK2         -318.85  -268.27  -209.54  -144.45   -74.97    -5.12
     XBADJ    STCK2           -7.10    -8.87   -10.37   -11.55   -12.38   -12.84
     XBADJ    STCK2          -12.91   -12.58   -12.25   -30.93   -50.57   -68.67
     XBADJ    STCK2          -84.69   -98.13  -108.60  -115.76  -119.40  -122.85

     YBADJ    STCK1          194.45   175.24   150.70   121.59    88.78    53.28
     YBADJ    STCK1           16.15   -21.46   -59.19   -92.75  -124.83  -153.12
     YBADJ    STCK1         -176.76  -195.02  -207.36  -213.40  -212.96  -206.80
     YBADJ    STCK1         -194.45  -175.24  -150.70  -121.59   -88.78   -53.28
     YBADJ    STCK1          -16.15    21.46    59.19    92.75   124.83   153.12
     YBADJ    STCK1          176.76   195.02   207.36   213.40   212.96   206.80

     YBADJ    STCK2          188.44   169.56   145.53   117.08    85.07    50.47
     YBADJ    STCK2           14.35   -22.22   -58.87   -91.36  -122.42  -149.76
     YBADJ    STCK2         -172.55  -190.10  -201.87  -207.50  -206.83  -200.64
     YBADJ    STCK2         -188.44  -169.56  -145.53  -117.08   -85.07   -50.47
     YBADJ    STCK2          -14.35    22.22    58.87    91.36   122.42   149.76
     YBADJ    STCK2          172.55   190.10   201.87   207.50   206.83   200.64


  ** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
  ** Variable Emission Scenario: "Scenario 1"
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
     EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
```

```
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK1        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT STCK2        HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
    SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
    INCLUDED "14848 Ops.rou"
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
    SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
    PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
    SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
    UAIRDATA 3120 2015
    PROFBASE 588.3 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
```

```
    PLOTFILE PERIOD ALL "14848 Ops.AD\PE00GALL.PLT" 31
    SUMMFILE "14848 Ops.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            4 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 SO W320    1103        PPARM: Input Parameter May Be Out-of-Range for
 Parameter            VS
 SO W320    1104        PPARM: Input Parameter May Be Out-of-Range for
 Parameter            VS
 ME W186    1245       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold
 used           0.50
 ME W187    1245       MEOPEN: ADJ_U* Option for Stable Low Winds used in
 AERMET

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 14:55:07

                              PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM

 **Model Calculates PERIOD Averages Only
```

```
1311   **This Run Includes:    440 Source(s);       1 Source Group(s); and      39 Receptor(s)
1312
1313                  with:      2 POINT(s), including
1314                             0 POINTCAP(s) and      0 POINTHOR(s)
1315                   and:    438 VOLUME source(s)
1316                   and:      0 AREA type source(s)
1317                   and:      0 LINE source(s)
1318                   and:      0 RLINE/RLINEXT source(s)
1319                   and:      0 OPENPIT source(s)
1320                   and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
1321                   and:      0 SWPOINT source(s)
1322
1323
1324   **Model Set To Continue RUNning After the Setup Testing.
1325
1326   **The AERMET Input Meteorological Data Version Date:  19191
1327
1328   **Output Options Selected:
1329            Model Outputs Tables of PERIOD Averages by Receptor
1330            Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
1331            Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)
1332
1333   **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
1334                                                                   m for Missing Hours
1335                                                                   b for Both Calm and
                                                                       Missing Hours
1336
1337   **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   588.30 ;  Decay Coef.
       =    0.000     ;  Rot. Angle =     0.0
1338                     Emission Units = GRAMS/SEC                              ;  Emission
                         Rate Unit Factor =   0.10000E+07
1339                     Output Units   = MICROGRAMS/M**3
1340
1341   **Approximate Storage Requirements of Model =      4.9 MB of RAM.
1342
1343   **Input Runstream File:
       aermod.inp

1344   **Output Print File:
       aermod.out

1345
1346   **Detailed Error/Message File:   14848
       Ops.err

1347   **File for Summary of Results:   14848
       Ops.sum

1348   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/24/26
1349    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        14:55:07
1350
                                   PAGE   2
1351   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1352
1353
1354                                                  *** POINT SOURCE DATA ***
1355
1356                 NUMBER EMISSION RATE                       BASE     STACK   STACK
                     STACK     STACK    BLDG   URBAN  CAP/  EMIS RATE
1357       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.    HEIGHT  TEMP.   EXIT
           VEL. DIAMETER  EXISTS SOURCE HOR   SCALAR
1358         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (DEG.K)
             (M/SEC)  (METERS)                    VARY BY
```

```
1359  - - -
```

```
1395   L0001416         0   0.34220E-06  465304.9 3810605.3  1050.1     3.49     4.00
       3.25     NO                     NO
1396   L0001417         0   0.34220E-06  465313.5 3810605.3  1050.0     3.49     4.00
       3.25     NO                     NO
1397   L0001418         0   0.34220E-06  465322.1 3810605.3  1050.0     3.49     4.00
       3.25     NO                     NO
1398   L0001419         0   0.34220E-06  465330.7 3810605.3  1050.0     3.49     4.00
       3.25     NO                     NO
1399   L0001420         0   0.34220E-06  465339.3 3810605.3  1050.0     3.49     4.00
       3.25     NO                     NO
1400   L0001421         0   0.34220E-06  465347.8 3810605.3  1049.8     3.49     4.00
       3.25     NO                     NO
1401   L0001422         0   0.34220E-06  465356.4 3810605.3  1049.6     3.49     4.00
       3.25     NO                     NO
1402   L0001423         0   0.34220E-06  465365.0 3810605.3  1049.5     3.49     4.00
       3.25     NO                     NO
1403   L0001424         0   0.34220E-06  465373.6 3810605.3  1049.3     3.49     4.00
       3.25     NO                     NO
1404   L0001425         0   0.34220E-06  465382.2 3810605.3  1049.2     3.49     4.00
       3.25     NO                     NO
1405   L0001426         0   0.34220E-06  465390.8 3810605.3  1049.1     3.49     4.00
       3.25     NO                     NO
1406   L0001427         0   0.34220E-06  465399.4 3810605.3  1049.0     3.49     4.00
       3.25     NO                     NO
1407   L0001428         0   0.34220E-06  465408.0 3810605.3  1048.8     3.49     4.00
       3.25     NO                     NO
1408   L0001429         0   0.34220E-06  465416.6 3810605.3  1048.6     3.49     4.00
       3.25     NO                     NO
1409   L0001430         0   0.34220E-06  465425.2 3810605.3  1048.5     3.49     4.00
       3.25     NO                     NO
1410   L0001431         0   0.34220E-06  465433.7 3810605.3  1048.3     3.49     4.00
       3.25     NO                     NO
1411   L0001432         0   0.34220E-06  465442.3 3810605.3  1048.2     3.49     4.00
       3.25     NO                     NO
1412   L0001433         0   0.34220E-06  465450.9 3810605.3  1048.1     3.49     4.00
       3.25     NO                     NO
1413   L0001434         0   0.34220E-06  465459.5 3810605.3  1048.0     3.49     4.00
       3.25     NO                     NO
1414   L0001435         0   0.34220E-06  465468.1 3810605.3  1048.0     3.49     4.00
       3.25     NO                     NO
1415   L0001436         0   0.34220E-06  465476.7 3810605.3  1048.0     3.49     4.00
       3.25     NO                     NO
1416   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/24/26
1417    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        14:55:07
1418
                                    PAGE   4
1419    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1420
1421
1422                                                    *** VOLUME SOURCE DATA ***
1423
1424                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
1425       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
1426         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
             (METERS)             BY
1427   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - -
1428
1429   L0001835         0   0.28900E-08  464951.7 3810533.1  1056.0     3.49     4.00
       3.25     NO                     NO
1430   L0001836         0   0.28900E-08  464960.2 3810534.1  1055.9     3.49     4.00
```

```
        3.25     NO                    NO
1431    L0001837         0   0.28900E-08  464968.7 3810535.1  1055.8     3.49     4.00
        3.25     NO                    NO
1432    L0001838         0   0.28900E-08  464977.3 3810536.1  1055.7     3.49     4.00
        3.25     NO                    NO
1433    L0001839         0   0.28900E-08  464985.8 3810537.0  1055.5     3.49     4.00
        3.25     NO                    NO
1434    L0001840         0   0.28900E-08  464994.4 3810538.0  1055.3     3.49     4.00
        3.25     NO                    NO
1435    L0001841         0   0.28900E-08  465002.9 3810539.0  1055.1     3.49     4.00
        3.25     NO                    NO
1436    L0001842         0   0.28900E-08  465011.5 3810539.4  1055.0     3.49     4.00
        3.25     NO                    NO
1437    L0001843         0   0.28900E-08  465020.0 3810539.6  1054.7     3.49     4.00
        3.25     NO                    NO
1438    L0001844         0   0.28900E-08  465028.6 3810539.8  1054.4     3.49     4.00
        3.25     NO                    NO
1439    L0001845         0   0.28900E-08  465037.2 3810540.0  1054.1     3.49     4.00
        3.25     NO                    NO
1440    L0001846         0   0.28900E-08  465045.8 3810540.2  1054.0     3.49     4.00
        3.25     NO                    NO
1441    L0001847         0   0.28900E-08  465054.4 3810540.3  1054.0     3.49     4.00
        3.25     NO                    NO
1442    L0001848         0   0.28900E-08  465063.0 3810540.5  1054.0     3.49     4.00
        3.25     NO                    NO
1443    L0001849         0   0.28900E-08  465071.6 3810540.7  1054.0     3.49     4.00
        3.25     NO                    NO
1444    L0001850         0   0.14710E-07  465078.6 3810540.9  1054.0     3.49     4.00
        3.25     NO                    NO
1445    L0001851         0   0.14710E-07  465087.2 3810540.9  1054.0     3.49     4.00
        3.25     NO                    NO
1446    L0001852         0   0.14710E-07  465095.7 3810540.8  1054.0     3.49     4.00
        3.25     NO                    NO
1447    L0001853         0   0.14710E-07  465104.3 3810540.7  1053.8     3.49     4.00
        3.25     NO                    NO
1448    L0001854         0   0.14710E-07  465112.9 3810540.7  1053.6     3.49     4.00
        3.25     NO                    NO
1449    L0001855         0   0.14710E-07  465121.5 3810540.6  1053.3     3.49     4.00
        3.25     NO                    NO
1450    L0001856         0   0.14710E-07  465130.1 3810540.5  1053.0     3.49     4.00
        3.25     NO                    NO
1451    L0001857         0   0.14710E-07  465138.7 3810540.5  1053.0     3.49     4.00
        3.25     NO                    NO
1452    L0001858         0   0.14710E-07  465147.3 3810540.4  1053.0     3.49     4.00
        3.25     NO                    NO
1453    L0001859         0   0.14710E-07  465155.9 3810540.3  1053.0     3.49     4.00
        3.25     NO                    NO
1454    L0001860         0   0.14710E-07  465164.5 3810540.3  1052.8     3.49     4.00
        3.25     NO                    NO
1455    L0001861         0   0.14710E-07  465173.1 3810540.2  1052.6     3.49     4.00
        3.25     NO                    NO
1456    L0001862         0   0.14710E-07  465181.6 3810540.1  1052.3     3.49     4.00
        3.25     NO                    NO
1457    L0001863         0   0.14710E-07  465190.2 3810540.1  1052.0     3.49     4.00
        3.25     NO                    NO
1458    L0001864         0   0.14710E-07  465198.8 3810540.0  1052.0     3.49     4.00
        3.25     NO                    NO
1459    L0001865         0   0.14710E-07  465207.4 3810539.9  1052.0     3.49     4.00
        3.25     NO                    NO
1460    L0001866         0   0.14710E-07  465216.0 3810539.9  1052.0     3.49     4.00
        3.25     NO                    NO
1461    L0001867         0   0.14710E-07  465224.6 3810539.8  1052.0     3.49     4.00
        3.25     NO                    NO
1462    L0001868         0   0.14710E-07  465233.2 3810539.7  1052.0     3.49     4.00
        3.25     NO                    NO
1463    L0001869         0   0.14710E-07  465241.8 3810539.6  1052.0     3.49     4.00
```

```
      3.25     NO                     NO
1464  L0001870         0   0.14710E-07  465250.4 3810539.6  1052.0     3.49     4.00
      3.25     NO                     NO
1465  L0001871         0   0.14710E-07  465259.0 3810539.5  1051.9     3.49     4.00
      3.25     NO                     NO
1466  L0001872         0   0.14710E-07  465267.5 3810539.4  1051.7     3.49     4.00
      3.25     NO                     NO
1467  L0001873         0   0.14710E-07  465276.1 3810539.4  1051.6     3.49     4.00
      3.25     NO                     NO
1468  L0001874         0   0.14710E-07  465284.7 3810539.3  1051.5     3.49     4.00
      3.25     NO                     NO
1469  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/24/26
1470   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       14:55:07
1471
                                    PAGE   5
1472   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1473
1474
1475                                                    *** VOLUME SOURCE DATA ***
1476
1477                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
1478       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
1479         ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
           (METERS)              BY
1480  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
1481
1482  L0001875         0   0.14710E-07  465293.3 3810539.2  1051.3     3.49     4.00
      3.25     NO                     NO
1483  L0001876         0   0.14710E-07  465301.9 3810539.2  1051.1     3.49     4.00
      3.25     NO                     NO
1484  L0001877         0   0.14710E-07  465310.5 3810539.1  1051.0     3.49     4.00
      3.25     NO                     NO
1485  L0001878         0   0.14710E-07  465319.1 3810539.0  1050.9     3.49     4.00
      3.25     NO                     NO
1486  L0001879         0   0.14710E-07  465327.7 3810539.0  1050.7     3.49     4.00
      3.25     NO                     NO
1487  L0001880         0   0.14710E-07  465336.3 3810538.9  1050.6     3.49     4.00
      3.25     NO                     NO
1488  L0001881         0   0.14710E-07  465344.8 3810538.8  1050.6     3.49     4.00
      3.25     NO                     NO
1489  L0001882         0   0.14710E-07  465353.4 3810538.8  1050.6     3.49     4.00
      3.25     NO                     NO
1490  L0001883         0   0.14710E-07  465362.0 3810538.7  1050.6     3.49     4.00
      3.25     NO                     NO
1491  L0001884         0   0.14710E-07  465370.6 3810538.6  1050.6     3.49     4.00
      3.25     NO                     NO
1492  L0001885         0   0.14710E-07  465379.2 3810538.6  1050.4     3.49     4.00
      3.25     NO                     NO
1493  L0001886         0   0.14710E-07  465387.8 3810538.5  1050.2     3.49     4.00
      3.25     NO                     NO
1494  L0001887         0   0.14710E-07  465396.4 3810538.5  1050.1     3.49     4.00
      3.25     NO                     NO
1495  L0001888         0   0.14710E-07  465405.0 3810538.5  1049.9     3.49     4.00
      3.25     NO                     NO
1496  L0001889         0   0.14710E-07  465413.6 3810538.6  1049.8     3.49     4.00
      3.25     NO                     NO
1497  L0001890         0   0.14710E-07  465422.2 3810538.7  1049.7     3.49     4.00
      3.25     NO                     NO
1498  L0001891         0   0.14710E-07  465430.7 3810538.7  1049.6     3.49     4.00
      3.25     NO                     NO
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1499   L0001892         0   0.14710E-07  465439.3 3810538.8  1049.4     3.49     4.00
       3.25     NO                     NO
1500   L0001893         0   0.14710E-07  465447.9 3810538.9  1049.2     3.49     4.00
       3.25     NO                     NO
1501   L0001894         0   0.14710E-07  465456.5 3810538.9  1049.1     3.49     4.00
       3.25     NO                     NO
1502   L0001895         0   0.14710E-07  465465.1 3810539.0  1049.0     3.49     4.00
       3.25     NO                     NO
1503   L0001896         0   0.14710E-07  465473.7 3810539.1  1048.6     3.49     4.00
       3.25     NO                     NO
1504   L0001897         0   0.14710E-07  465482.2 3810540.1  1048.5     3.49     4.00
       3.25     NO                     NO
1505   L0001898         0   0.14710E-07  465490.7 3810541.5  1048.5     3.49     4.00
       3.25     NO                     NO
1506   L0001899         0   0.14710E-07  465499.1 3810542.9  1048.4     3.49     4.00
       3.25     NO                     NO
1507   L0001900         0   0.14710E-07  465507.6 3810544.3  1048.4     3.49     4.00
       3.25     NO                     NO
1508   L0001901         0   0.14710E-07  465516.1 3810545.8  1048.3     3.49     4.00
       3.25     NO                     NO
1509   L0001902         0   0.14710E-07  465524.6 3810547.2  1048.3     3.49     4.00
       3.25     NO                     NO
1510   L0001903         0   0.14710E-07  465532.9 3810549.3  1048.2     3.49     4.00
       3.25     NO                     NO
1511   L0001904         0   0.14710E-07  465541.1 3810551.8  1048.1     3.49     4.00
       3.25     NO                     NO
1512   L0001905         0   0.14710E-07  465549.3 3810554.2  1048.1     3.49     4.00
       3.25     NO                     NO
1513   L0001906         0   0.14710E-07  465557.6 3810556.6  1048.0     3.49     4.00
       3.25     NO                     NO
1514   L0001907         0   0.14710E-07  465565.8 3810559.0  1048.0     3.49     4.00
       3.25     NO                     NO
1515   L0001908         0   0.14710E-07  465574.1 3810561.4  1047.9     3.49     4.00
       3.25     NO                     NO
1516   L0001909         0   0.14710E-07  465582.3 3810563.9  1047.7     3.49     4.00
       3.25     NO                     NO
1517   L0001910         0   0.14710E-07  465590.1 3810567.3  1047.6     3.49     4.00
       3.25     NO                     NO
1518   L0001911         0   0.14710E-07  465597.9 3810571.1  1047.5     3.49     4.00
       3.25     NO                     NO
1519   L0001912         0   0.14710E-07  465605.6 3810574.9  1047.4     3.49     4.00
       3.25     NO                     NO
1520   L0001913         0   0.14710E-07  465613.3 3810578.7  1047.2     3.49     4.00
       3.25     NO                     NO
1521   L0001914         0   0.14710E-07  465621.0 3810582.4  1047.1     3.49     4.00
       3.25     NO                     NO
1522   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/24/26
1523    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        14:55:07
1524
                                  PAGE   6
1525    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1526
1527
1528                                                  *** VOLUME SOURCE DATA ***
1529
1530                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
1531       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
1532         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
             (METERS)              BY
1533    - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        - - - - - - - - - - - - - - - - - -
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1534
1535    L0001915          0   0.14710E-07  465628.6 3810586.5  1047.0     3.49     4.00
        3.25     NO                    NO
1536    L0001916          0   0.14710E-07  465635.8 3810591.1  1046.8     3.49     4.00
        3.25     NO                    NO
1537    L0001917          0   0.14710E-07  465643.1 3810595.7  1046.6     3.49     4.00
        3.25     NO                    NO
1538    L0001918          0   0.14710E-07  465650.4 3810600.3  1046.3     3.49     4.00
        3.25     NO                    NO
1539    L0001919          0   0.58480E-07  465659.4 3810605.9  1046.1     3.49     4.00
        3.25     NO                    NO
1540    L0001920          0   0.58480E-07  465666.4 3810610.8  1046.0     3.49     4.00
        3.25     NO                    NO
1541    L0001921          0   0.58480E-07  465673.5 3810615.7  1046.0     3.49     4.00
        3.25     NO                    NO
1542    L0001922          0   0.58480E-07  465680.5 3810620.6  1045.8     3.49     4.00
        3.25     NO                    NO
1543    L0001923          0   0.58480E-07  465687.6 3810625.5  1045.7     3.49     4.00
        3.25     NO                    NO
1544    L0001924          0   0.58480E-07  465695.6 3810626.4  1045.7     3.49     4.00
        3.25     NO                    NO
1545    L0001925          0   0.58480E-07  465702.7 3810621.5  1045.7     3.49     4.00
        3.25     NO                    NO
1546    L0001926          0   0.58480E-07  465709.7 3810616.6  1045.7     3.49     4.00
        3.25     NO                    NO
1547    L0001927          0   0.58480E-07  465706.9 3810609.8  1045.8     3.49     4.00
        3.25     NO                    NO
1548    L0001928          0   0.58480E-07  465702.2 3810602.6  1046.0     3.49     4.00
        3.25     NO                    NO
1549    L0001929          0   0.58480E-07  465697.6 3810595.3  1046.0     3.49     4.00
        3.25     NO                    NO
1550    L0001930          0   0.58480E-07  465692.9 3810588.1  1046.0     3.49     4.00
        3.25     NO                    NO
1551    L0001931          0   0.58480E-07  465688.3 3810580.9  1046.2     3.49     4.00
        3.25     NO                    NO
1552    L0001932          0   0.58480E-07  465683.6 3810573.7  1046.4     3.49     4.00
        3.25     NO                    NO
1553    L0001933          0   0.58480E-07  465679.0 3810566.4  1046.7     3.49     4.00
        3.25     NO                    NO
1554    L0001934          0   0.58480E-07  465674.3 3810559.2  1046.9     3.49     4.00
        3.25     NO                    NO
1555    L0001935          0   0.58480E-07  465669.7 3810552.0  1047.0     3.49     4.00
        3.25     NO                    NO
1556    L0001936          0   0.58480E-07  465665.1 3810544.8  1047.1     3.49     4.00
        3.25     NO                    NO
1557    L0001937          0   0.58480E-07  465660.4 3810537.5  1047.2     3.49     4.00
        3.25     NO                    NO
1558    L0001938          0   0.58480E-07  465655.8 3810530.3  1047.4     3.49     4.00
        3.25     NO                    NO
1559    L0001939          0   0.58480E-07  465651.1 3810523.1  1047.7     3.49     4.00
        3.25     NO                    NO
1560    L0001940          0   0.58480E-07  465646.5 3810515.9  1047.8     3.49     4.00
        3.25     NO                    NO
1561    L0001941          0   0.58480E-07  465641.8 3810508.6  1048.0     3.49     4.00
        3.25     NO                    NO
1562    L0001942          0   0.58480E-07  465637.2 3810501.4  1048.0     3.49     4.00
        3.25     NO                    NO
1563    L0001943          0   0.58480E-07  465632.5 3810494.2  1048.0     3.49     4.00
        3.25     NO                    NO
1564    L0001944          0   0.58480E-07  465627.8 3810487.0  1048.0     3.49     4.00
        3.25     NO                    NO
1565    L0001945          0   0.58480E-07  465623.1 3810479.8  1048.0     3.49     4.00
        3.25     NO                    NO
1566    L0001946          0   0.58480E-07  465618.4 3810472.6  1048.0     3.49     4.00
        3.25     NO                    NO
1567    L0001947          0   0.58480E-07  465613.7 3810465.4  1048.0     3.49     4.00
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1568  L0001948         0   0.58480E-07  465609.0 3810458.2  1048.0     3.49     4.00
      3.25     NO                     NO
1569  L0001949         0   0.58480E-07  465604.4 3810451.0  1048.1     3.49     4.00
      3.25     NO                     NO
1570  L0001950         0   0.58480E-07  465599.7 3810443.8  1048.1     3.49     4.00
      3.25     NO                     NO
1571  L0001951         0   0.58480E-07  465595.0 3810436.6  1048.0     3.49     4.00
      3.25     NO                     NO
1572  L0001952         0   0.58480E-07  465590.3 3810429.4  1048.1     3.49     4.00
      3.25     NO                     NO
1573  L0001953         0   0.58480E-07  465585.6 3810422.2  1048.4     3.49     4.00
      3.25     NO                     NO
1574  L0001954         0   0.58480E-07  465580.9 3810415.0  1048.7     3.49     4.00
      3.25     NO                     NO
1575  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/24/26
1576   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       14:55:07
1577
                                  PAGE   7
1578   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1579
1580
1581                                                    *** VOLUME SOURCE DATA ***
1582
1583                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
1584       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
1585         ID          CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
           (METERS)              BY
1586  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - -
1587
1588  L0001955         0   0.58480E-07  465576.2 3810407.8  1049.1     3.49     4.00
      3.25     NO                     NO
1589  L0001956         0   0.58480E-07  465571.5 3810400.6  1049.4     3.49     4.00
      3.25     NO                     NO
1590  L0001957         0   0.58480E-07  465566.8 3810393.4  1049.7     3.49     4.00
      3.25     NO                     NO
1591  L0001958         0   0.58480E-07  465562.1 3810386.3  1049.9     3.49     4.00
      3.25     NO                     NO
1592  L0001959         0   0.58480E-07  465557.5 3810379.1  1050.0     3.49     4.00
      3.25     NO                     NO
1593  L0001960         0   0.58480E-07  465552.8 3810371.9  1050.1     3.49     4.00
      3.25     NO                     NO
1594  L0001961         0   0.58480E-07  465548.1 3810364.7  1050.4     3.49     4.00
      3.25     NO                     NO
1595  L0001962         0   0.58480E-07  465543.4 3810357.5  1050.8     3.49     4.00
      3.25     NO                     NO
1596  L0001963         0   0.58480E-07  465538.7 3810350.3  1051.2     3.49     4.00
      3.25     NO                     NO
1597  L0001964         0   0.58480E-07  465534.0 3810343.1  1051.6     3.49     4.00
      3.25     NO                     NO
1598  L0001965         0   0.58480E-07  465529.3 3810335.9  1051.8     3.49     4.00
      3.25     NO                     NO
1599  L0001966         0   0.58480E-07  465524.6 3810328.7  1051.9     3.49     4.00
      3.25     NO                     NO
1600  L0001967         0   0.58480E-07  465519.9 3810321.5  1052.0     3.49     4.00
      3.25     NO                     NO
1601  L0001968         0   0.58480E-07  465515.3 3810314.3  1052.0     3.49     4.00
      3.25     NO                     NO
1602  L0001969         0   0.58480E-07  465510.6 3810307.1  1052.1     3.49     4.00
      3.25     NO                     NO
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1603    L0001970         0   0.58480E-07  465505.9 3810299.9  1052.2     3.49     4.00
        3.25     NO                    NO
1604    L0001971         0   0.58480E-07  465501.2 3810292.7  1052.5     3.49     4.00
        3.25     NO                    NO
1605    L0001972         0   0.58480E-07  465496.5 3810285.5  1052.8     3.49     4.00
        3.25     NO                    NO
1606    L0001973         0   0.58480E-07  465491.8 3810278.3  1053.0     3.49     4.00
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1607    L0001974         0   0.58480E-07  465487.1 3810271.1  1053.0     3.49     4.00
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1608    L0001975         0   0.58480E-07  465482.5 3810263.9  1053.0     3.49     4.00
        3.25     NO                    NO
1609    L0001976         0   0.58480E-07  465477.8 3810256.7  1053.0     3.49     4.00
        3.25     NO                    NO
1610    L0001977         0   0.58480E-07  465473.1 3810249.5  1053.2     3.49     4.00
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1611    L0001978         0   0.58480E-07  465468.4 3810242.3  1053.5     3.49     4.00
        3.25     NO                    NO
1612    L0001979         0   0.58480E-07  465463.7 3810235.1  1053.7     3.49     4.00
        3.25     NO                    NO
1613    L0001980         0   0.58480E-07  465459.1 3810227.9  1053.9     3.49     4.00
        3.25     NO                    NO
1614    L0001981         0   0.58480E-07  465454.4 3810220.7  1054.0     3.49     4.00
        3.25     NO                    NO
1615    L0001982         0   0.58480E-07  465449.7 3810213.5  1054.0     3.49     4.00
        3.25     NO                    NO
1616    L0001983         0   0.58480E-07  465445.0 3810206.3  1054.0     3.49     4.00
        3.25     NO                    NO
1617    L0001984         0   0.58480E-07  465440.4 3810199.0  1054.0     3.49     4.00
        3.25     NO                    NO
1618    L0001985         0   0.58480E-07  465435.7 3810191.8  1054.1     3.49     4.00
        3.25     NO                    NO
1619    L0001986         0   0.58480E-07  465431.0 3810184.6  1054.4     3.49     4.00
        3.25     NO                    NO
1620    L0001987         0   0.58480E-07  465426.3 3810177.4  1054.6     3.49     4.00
        3.25     NO                    NO
1621    L0001988         0   0.58480E-07  465421.6 3810170.2  1054.9     3.49     4.00
        3.25     NO                    NO
1622    L0001989         0   0.58480E-07  465417.0 3810163.0  1055.0     3.49     4.00
        3.25     NO                    NO
1623    L0001990         0   0.58480E-07  465412.3 3810155.8  1055.2     3.49     4.00
        3.25     NO                    NO
1624    L0001991         0   0.58480E-07  465407.6 3810148.6  1055.4     3.49     4.00
        3.25     NO                    NO
1625    L0001992         0   0.58480E-07  465402.9 3810141.4  1055.7     3.49     4.00
        3.25     NO                    NO
1626    L0001993         0   0.58480E-07  465398.2 3810134.2  1056.0     3.49     4.00
        3.25     NO                    NO
1627    L0001994         0   0.58480E-07  465393.6 3810127.0  1056.0     3.49     4.00
        3.25     NO                    NO
1628    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/24/26
1629     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         14:55:07
1630
                                    PAGE   8
1631    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1632
1633
1634                                                  *** VOLUME SOURCE DATA ***
1635
1636                  NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                      INIT.   URBAN  EMISSION RATE   AIRCRAFT
1637      SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
          SZ     SOURCE  SCALAR VARY
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      ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
      (METERS)             BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

L0001995          0   0.58480E-07  465388.9 3810119.8  1056.0     3.49     4.00
     3.25     NO                    NO
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     3.25     NO                    NO
L0001997          0   0.58480E-07  465379.5 3810105.4  1056.0     3.49     4.00
     3.25     NO                    NO
L0001998          0   0.58480E-07  465374.9 3810098.2  1056.2     3.49     4.00
     3.25     NO                    NO
L0001999          0   0.58480E-07  465370.2 3810091.0  1056.5     3.49     4.00
     3.25     NO                    NO
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     3.25     NO                    NO
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     3.25     NO                    NO
L0002002          0   0.58480E-07  465356.1 3810069.4  1057.0     3.49     4.00
     3.25     NO                    NO
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     3.25     NO                    NO
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     3.25     NO                    NO
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     3.25     NO                    NO
L0002006          0   0.58480E-07  465337.4 3810040.6  1057.2     3.49     4.00
     3.25     NO                    NO
L0002007          0   0.58480E-07  465332.8 3810033.3  1057.6     3.49     4.00
     3.25     NO                    NO
L0002008          0   0.58480E-07  465328.0 3810026.2  1057.8     3.49     4.00
     3.25     NO                    NO
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     3.25     NO                    NO
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     3.25     NO                    NO
L0002011          0   0.58480E-07  465313.5 3810004.9  1058.0     3.49     4.00
     3.25     NO                    NO
L0002012          0   0.58480E-07  465308.7 3809997.7  1058.0     3.49     4.00
     3.25     NO                    NO
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     3.25     NO                    NO
L0002018          0   0.58480E-07  465279.9 3809955.0  1059.0     3.49     4.00
     3.25     NO                    NO
L0002019          0   0.58480E-07  465275.1 3809947.9  1059.4     3.49     4.00
     3.25     NO                    NO
L0002020          0   0.58480E-07  465270.3 3809940.8  1059.7     3.49     4.00
     3.25     NO                    NO
L0002021          0   0.58480E-07  465265.5 3809933.6  1059.9     3.49     4.00
     3.25     NO                    NO
L0002022          0   0.58480E-07  465260.7 3809926.5  1060.0     3.49     4.00
     3.25     NO                    NO
L0002023          0   0.58480E-07  465255.9 3809919.4  1060.2     3.49     4.00
     3.25     NO                    NO
L0002024          0   0.58480E-07  465251.1 3809912.3  1060.4     3.49     4.00
     3.25     NO                    NO
L0002025          0   0.58480E-07  465246.3 3809905.1  1060.6     3.49     4.00
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      3.25     NO                     NO
1672  L0002026         0   0.58480E-07  465241.5 3809898.0  1060.7     3.49     4.00
      3.25     NO                     NO
1673  L0002027         0   0.58480E-07  465236.7 3809890.9  1060.6     3.49     4.00
      3.25     NO                     NO
1674  L0002028         0   0.58480E-07  465231.9 3809883.8  1060.6     3.49     4.00
      3.25     NO                     NO
1675  L0002029         0   0.58480E-07  465226.6 3809877.0  1060.7     3.49     4.00
      3.25     NO                     NO
1676  L0002030         0   0.58480E-07  465221.0 3809870.5  1060.8     3.49     4.00
      3.25     NO                     NO
1677  L0002031         0   0.58480E-07  465215.4 3809864.0  1061.1     3.49     4.00
      3.25     NO                     NO
1678  L0002032         0   0.58480E-07  465209.8 3809857.5  1061.3     3.49     4.00
      3.25     NO                     NO
1679  L0002033         0   0.58480E-07  465204.2 3809851.0  1061.5     3.49     4.00
      3.25     NO                     NO
1680  L0002034         0   0.58480E-07  465198.6 3809844.5  1061.7     3.49     4.00
      3.25     NO                     NO
1681  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/24/26
1682   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       14:55:07
1683
                                  PAGE   9
1684  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1685
1686
1687                                                  *** VOLUME SOURCE DATA ***
1688
1689                  NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                      INIT.   URBAN  EMISSION RATE   AIRCRAFT
1690    SOURCE         PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY
        SZ     SOURCE  SCALAR VARY
1691      ID           CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
          (METERS)              BY
1692  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - -
1693
1694  L0002035         0   0.58480E-07  465193.0 3809838.0  1061.9     3.49     4.00
      3.25     NO                     NO
1695  L0002036         0   0.58480E-07  465186.9 3809831.9  1062.0     3.49     4.00
      3.25     NO                     NO
1696  L0002037         0   0.58480E-07  465180.0 3809826.9  1062.0     3.49     4.00
      3.25     NO                     NO
1697  L0002038         0   0.58480E-07  465173.1 3809821.8  1062.0     3.49     4.00
      3.25     NO                     NO
1698  L0002039         0   0.58480E-07  465165.8 3809817.2  1062.0     3.49     4.00
      3.25     NO                     NO
1699  L0002040         0   0.58480E-07  465158.1 3809813.4  1062.0     3.49     4.00
      3.25     NO                     NO
1700  L0002041         0   0.58480E-07  465150.4 3809809.6  1062.3     3.49     4.00
      3.25     NO                     NO
1701  L0002042         0   0.58480E-07  465142.7 3809805.8  1062.6     3.49     4.00
      3.25     NO                     NO
1702  L0002043         0   0.58480E-07  465134.8 3809802.6  1062.9     3.49     4.00
      3.25     NO                     NO
1703  L0002044         0   0.58480E-07  465126.8 3809799.4  1063.0     3.49     4.00
      3.25     NO                     NO
1704  L0002045         0   0.58480E-07  465118.8 3809796.3  1063.1     3.49     4.00
      3.25     NO                     NO
1705  L0002046         0   0.58480E-07  465110.5 3809794.2  1063.2     3.49     4.00
      3.25     NO                     NO
1706  L0002047         0   0.58480E-07  465102.0 3809792.6  1063.4     3.49     4.00
      3.25     NO                     NO
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1707    L0002048         0   0.58480E-07  465093.6 3809790.9  1063.5     3.49     4.00
        3.25     NO                    NO
1708    L0002049         0   0.58480E-07  465085.0 3809790.7  1063.5     3.49     4.00
        3.25     NO                    NO
1709    L0002050         0   0.58480E-07  465076.5 3809790.6  1063.5     3.49     4.00
        3.25     NO                    NO
1710    L0002051         0   0.58480E-07  465067.9 3809790.5  1063.5     3.49     4.00
        3.25     NO                    NO
1711    L0002052         0   0.58480E-07  465059.3 3809790.3  1063.5     3.49     4.00
        3.25     NO                    NO
1712    L0002053         0   0.58480E-07  465050.7 3809790.2  1063.5     3.49     4.00
        3.25     NO                    NO
1713    L0002054         0   0.58480E-07  465042.1 3809790.1  1063.5     3.49     4.00
        3.25     NO                    NO
1714    L0002055         0   0.58480E-07  465033.5 3809790.0  1063.6     3.49     4.00
        3.25     NO                    NO
1715    L0002056         0   0.58480E-07  465024.9 3809789.9  1063.8     3.49     4.00
        3.25     NO                    NO
1716    L0002057         0   0.58480E-07  465016.3 3809790.1  1063.9     3.49     4.00
        3.25     NO                    NO
1717    L0002058         0   0.58480E-07  465007.7 3809790.4  1064.0     3.49     4.00
        3.25     NO                    NO
1718    L0002059         0   0.58480E-07  464999.2 3809790.6  1064.0     3.49     4.00
        3.25     NO                    NO
1719    L0002060         0   0.58480E-07  464990.6 3809790.9  1064.0     3.49     4.00
        3.25     NO                    NO
1720    L0002061         0   0.58480E-07  464982.0 3809791.2  1064.0     3.49     4.00
        3.25     NO                    NO
1721    L0002062         0   0.58480E-07  464973.4 3809791.5  1064.0     3.49     4.00
        3.25     NO                    NO
1722    L0002063         0   0.58480E-07  464964.8 3809791.8  1064.0     3.49     4.00
        3.25     NO                    NO
1723    L0002064         0   0.58480E-07  464956.2 3809792.0  1064.0     3.49     4.00
        3.25     NO                    NO
1724    L0002065         0   0.58480E-07  464947.6 3809792.3  1064.0     3.49     4.00
        3.25     NO                    NO
1725    L0002066         0   0.95980E-07  464939.9 3809792.7  1064.1     3.49     6.51
        3.25     NO                    NO
1726    L0002067         0   0.95980E-07  464925.9 3809792.6  1064.4     3.49     6.51
        3.25     NO                    NO
1727    L0002068         0   0.95980E-07  464911.9 3809792.6  1064.6     3.49     6.51
        3.25     NO                    NO
1728    L0002069         0   0.95980E-07  464897.9 3809792.6  1064.8     3.49     6.51
        3.25     NO                    NO
1729    L0002070         0   0.95980E-07  464883.9 3809792.6  1065.0     3.49     6.51
        3.25     NO                    NO
1730    L0002071         0   0.95980E-07  464869.9 3809792.6  1065.0     3.49     6.51
        3.25     NO                    NO
1731    L0002072         0   0.95980E-07  464855.9 3809792.5  1065.1     3.49     6.51
        3.25     NO                    NO
1732    L0002073         0   0.95980E-07  464841.9 3809792.5  1065.3     3.49     6.51
        3.25     NO                    NO
1733    L0002074         0   0.95980E-07  464827.9 3809792.5  1065.5     3.49     6.51
        3.25     NO                    NO
1734    FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
        Palmetto Industrial\14848 ***        03/24/26
1735     *** AERMET - VERSION  19191 ***
         ***                                                                    ***
         14:55:07
1736
                                    PAGE  10
1737    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1738
1739
1740                                                  *** VOLUME SOURCE DATA ***
1741
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SOURCE ID	NUMBER INIT. PART. CATS.	EMISSION RATE (GRAMS/SEC)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	X (METERS)	Y (METERS)	AIRCRAFT ELEV. (METERS)	BASE HEIGHT (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	SZ
L0002075	0	0.95980E-07	NO	NO	464813.9	3809792.5	1065.7	3.49	6.51	3.25	NO
L0002076	0	0.95980E-07	NO	NO	464799.9	3809792.4	1066.0	3.49	6.51	3.25	NO
L0002077	0	0.95980E-07	NO	NO	464785.9	3809792.4	1066.0	3.49	6.51	3.25	NO
L0002078	0	0.95980E-07	NO	NO	464771.9	3809792.4	1066.0	3.49	6.51	3.25	NO
L0002079	0	0.95980E-07	NO	NO	464757.9	3809792.4	1066.2	3.49	6.51	3.25	NO
L0002080	0	0.95980E-07	NO	NO	464743.9	3809792.4	1066.4	3.49	6.51	3.25	NO
L0002081	0	0.95980E-07	NO	NO	464736.8	3809785.5	1066.7	3.49	6.51	3.25	NO
L0002082	0	0.95980E-07	NO	NO	464736.8	3809771.5	1067.0	3.49	6.51	3.25	NO
L0002083	0	0.95980E-07	NO	NO	464736.8	3809757.5	1067.0	3.49	6.51	3.25	NO
L0002084	0	0.95980E-07	NO	NO	464736.9	3809743.5	1067.0	3.49	6.51	3.25	NO
L0002085	0	0.95980E-07	NO	NO	464736.9	3809729.5	1067.1	3.49	6.51	3.25	NO
L0002086	0	0.95980E-07	NO	NO	464736.9	3809715.5	1067.1	3.49	6.51	3.25	NO
L0002087	0	0.95980E-07	NO	NO	464736.9	3809701.5	1067.5	3.49	6.51	3.25	NO
L0002088	0	0.95980E-07	NO	NO	464736.9	3809687.5	1068.0	3.49	6.51	3.25	NO
L0002089	0	0.95980E-07	NO	NO	464737.0	3809673.5	1068.0	3.49	6.51	3.25	NO
L0002090	0	0.95980E-07	NO	NO	464737.0	3809659.5	1068.0	3.49	6.51	3.25	NO
L0002091	0	0.95980E-07	NO	NO	464737.0	3809645.5	1068.3	3.49	6.51	3.25	NO
L0002092	0	0.95980E-07	NO	NO	464737.0	3809631.5	1068.8	3.49	6.51	3.25	NO
L0002093	0	0.95980E-07	NO	NO	464737.0	3809617.5	1069.0	3.49	6.51	3.25	NO
L0002094	0	0.95980E-07	NO	NO	464737.0	3809603.5	1069.1	3.49	6.51	3.25	NO
L0002095	0	0.95980E-07	NO	NO	464737.1	3809589.5	1069.3	3.49	6.51	3.25	NO
L0002096	0	0.95980E-07	NO	NO	464737.1	3809575.5	1069.7	3.49	6.51	3.25	NO
L0002097	0	0.95980E-07	NO	NO	464737.1	3809561.5	1070.0	3.49	6.51	3.25	NO
L0002098	0	0.95980E-07	NO	NO	464737.1	3809547.5	1070.0	3.49	6.51	3.25	NO
L0002099	0	0.95980E-07	NO	NO	464737.5	3809533.9	1070.0	3.49	6.51	3.25	NO
L0002100	0	0.95980E-07	NO	NO	464751.5	3809534.1	1070.0	3.49	6.51	3.25	NO
L0002101	0	0.95980E-07	NO	NO	464765.5	3809534.3	1070.0	3.49	6.51	3.25	NO
L0002102	0	0.95980E-07	NO	NO	464779.5	3809534.5	1070.0	3.49	6.51	3.25	NO
L0002103	0	0.95980E-07	NO	NO	464793.5	3809534.7	1070.0	3.49	6.51		

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      3.25     NO                    NO
1776  L0002104         0   0.95980E-07  464807.5 3809534.9  1069.8     3.49     6.51
      3.25     NO                    NO
1777  L0002105         0   0.95980E-07  464821.5 3809535.2  1069.3     3.49     6.51
      3.25     NO                    NO
1778  L0002106         0   0.95980E-07  464835.5 3809535.4  1069.0     3.49     6.51
      3.25     NO                    NO
1779  L0002107         0   0.95980E-07  464849.5 3809536.0  1069.0     3.49     6.51
      3.25     NO                    NO
1780  L0002108         0   0.95980E-07  464863.5 3809536.7  1069.0     3.49     6.51
      3.25     NO                    NO
1781  L0002109         0   0.95980E-07  464877.5 3809537.5  1069.0     3.49     6.51
      3.25     NO                    NO
1782  L0002110         0   0.95980E-07  464891.4 3809538.3  1068.9     3.49     6.51
      3.25     NO                    NO
1783  L0002111         0   0.95980E-07  464905.4 3809539.0  1068.9     3.49     6.51
      3.25     NO                    NO
1784  L0002112         0   0.95980E-07  464919.4 3809539.8  1068.9     3.49     6.51
      3.25     NO                    NO
1785  L0002113         0   0.95980E-07  464933.4 3809540.6  1068.5     3.49     6.51
      3.25     NO                    NO
1786  L0002114         0   0.95980E-07  464947.4 3809541.4  1068.1     3.49     6.51
      3.25     NO                    NO
1787  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/24/26
1788   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       14:55:07
1789
                                  PAGE  11
1790   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1791
1792
1793                                                  *** VOLUME SOURCE DATA ***
1794
1795                 NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                     INIT.   URBAN  EMISSION RATE   AIRCRAFT
1796       SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
           SZ     SOURCE  SCALAR VARY
1797         ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
           (METERS)             BY
1798   - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       - - - - - - - - - - - - - - - - - -
1799
1800  L0002115         0   0.95980E-07  464961.4 3809541.8  1068.0     3.49     6.51
      3.25     NO                    NO
1801  L0002116         0   0.95980E-07  464975.4 3809541.9  1068.0     3.49     6.51
      3.25     NO                    NO
1802  L0002117         0   0.95980E-07  464989.4 3809542.1  1068.0     3.49     6.51
      3.25     NO                    NO
1803  L0002118         0   0.95980E-07  465003.3 3809542.2  1068.0     3.49     6.51
      3.25     NO                    NO
1804  L0002119         0   0.95980E-07  465017.3 3809542.5  1068.0     3.49     6.51
      3.25     NO                    NO
1805  L0002120         0   0.95980E-07  465031.3 3809542.8  1068.0     3.49     6.51
      3.25     NO                    NO
1806  L0002121         0   0.95980E-07  465045.3 3809543.1  1068.0     3.49     6.51
      3.25     NO                    NO
1807  L0002122         0   0.95980E-07  465059.3 3809543.4  1067.8     3.49     6.51
      3.25     NO                    NO
1808  L0002123         0   0.95980E-07  465073.3 3809543.4  1067.8     3.49     6.51
      3.25     NO                    NO
1809  L0002124         0   0.95980E-07  465087.3 3809543.0  1067.8     3.49     6.51
      3.25     NO                    NO
1810  L0002125         0   0.95980E-07  465101.3 3809542.6  1067.8     3.49     6.51
      3.25     NO                    NO
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 L0002126         0   0.95980E-07  465115.3 3809542.2  1067.8     3.49     6.51
     3.25     NO                      NO
 L0002127         0   0.95980E-07  465129.3 3809541.8  1067.8     3.49     6.51
     3.25     NO                      NO
 L0002128         0   0.95980E-07  465143.3 3809541.4  1067.8     3.49     6.51
     3.25     NO                      NO
 L0002129         0   0.95980E-07  465157.3 3809540.6  1067.8     3.49     6.51
     3.25     NO                      NO
 L0002130         0   0.95980E-07  465171.3 3809539.8  1067.5     3.49     6.51
     3.25     NO                      NO
 L0002131         0   0.95980E-07  465185.2 3809539.0  1067.1     3.49     6.51
     3.25     NO                      NO
 L0001734         0   0.10190E-06  465643.2 3810619.0  1046.0     3.49     4.00
     3.25     NO                      NO
 L0001735         0   0.10190E-06  465637.6 3810625.5  1046.0     3.49     4.00
     3.25     NO                      NO
 L0001736         0   0.10190E-06  465632.0 3810632.0  1046.0     3.49     4.00
     3.25     NO                      NO
 L0001737         0   0.10190E-06  465626.4 3810638.6  1046.0     3.49     4.00
     3.25     NO                      NO
 L0001738         0   0.10190E-06  465619.8 3810636.7  1046.0     3.49     4.00
     3.25     NO                      NO
 L0001739         0   0.10190E-06  465612.9 3810631.6  1046.0     3.49     4.00
     3.25     NO                      NO
 L0001740         0   0.10190E-06  465606.0 3810626.5  1046.1     3.49     4.00
     3.25     NO                      NO
 L0001741         0   0.10190E-06  465599.1 3810621.4  1046.3     3.49     4.00
     3.25     NO                      NO
 L0001742         0   0.10190E-06  465592.2 3810616.3  1046.6     3.49     4.00
     3.25     NO                      NO
 L0001743         0   0.10190E-06  465585.2 3810611.3  1046.8     3.49     4.00
     3.25     NO                      NO
 L0001744         0   0.10190E-06  465578.0 3810606.6  1047.0     3.49     4.00
     3.25     NO                      NO
 L0001745         0   0.10190E-06  465570.8 3810601.9  1047.1     3.49     4.00
     3.25     NO                      NO
 L0001746         0   0.10190E-06  465563.6 3810597.2  1047.3     3.49     4.00
     3.25     NO                      NO
 L0001747         0   0.10190E-06  465556.5 3810592.5  1047.6     3.49     4.00
     3.25     NO                      NO
 L0001748         0   0.10190E-06  465548.8 3810588.8  1047.9     3.49     4.00
     3.25     NO                      NO
 L0001749         0   0.10190E-06  465540.8 3810585.5  1048.0     3.49     4.00
     3.25     NO                      NO
 L0001750         0   0.10190E-06  465532.2 3810585.1  1048.0     3.49     4.00
     3.25     NO                      NO
 L0001751         0   0.10190E-06  465523.7 3810584.7  1048.0     3.49     4.00
     3.25     NO                      NO
 L0001752         0   0.10190E-06  465515.1 3810584.7  1048.0     3.49     4.00
     3.25     NO                      NO
 L0001753         0   0.10190E-06  465506.5 3810584.7  1048.0     3.49     4.00
     3.25     NO                      NO
 L0001754         0   0.10190E-06  465497.9 3810584.7  1048.0     3.49     4.00
     3.25     NO                      NO
 L0001755         0   0.10190E-06  465489.3 3810584.7  1048.0     3.49     4.00
     3.25     NO                      NO
 L0001756         0   0.13440E-06  465140.4 3810585.5  1052.7     3.49     4.00
     3.25     NO                      NO
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 14:55:07

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER INIT. PART.	EMISSION RATE (GRAMS/SEC)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	SZ (METERS)
L0001757	0	0.13440E-06	NO	NO	465149.0	3810585.5	1052.4	3.49	4.00	3.25
L0001758	0	0.13440E-06	NO	NO	465157.6	3810585.5	1052.1	3.49	4.00	3.25
L0001759	0	0.13440E-06	NO	NO	465166.2	3810585.4	1052.0	3.49	4.00	3.25
L0001760	0	0.13440E-06	NO	NO	465174.8	3810585.4	1052.0	3.49	4.00	3.25
L0001761	0	0.13440E-06	NO	NO	465183.3	3810585.4	1052.0	3.49	4.00	3.25
L0001762	0	0.13440E-06	NO	NO	465191.9	3810585.4	1052.0	3.49	4.00	3.25
L0001763	0	0.13440E-06	NO	NO	465200.5	3810585.4	1052.0	3.49	4.00	3.25
L0001764	0	0.13440E-06	NO	NO	465209.1	3810585.3	1052.0	3.49	4.00	3.25
L0001765	0	0.13440E-06	NO	NO	465217.7	3810585.3	1052.0	3.49	4.00	3.25
L0001766	0	0.13440E-06	NO	NO	465226.3	3810585.3	1051.8	3.49	4.00	3.25
L0001767	0	0.13440E-06	NO	NO	465234.9	3810585.3	1051.5	3.49	4.00	3.25
L0001768	0	0.13440E-06	NO	NO	465243.5	3810585.2	1051.2	3.49	4.00	3.25
L0001769	0	0.13440E-06	NO	NO	465252.1	3810585.2	1051.0	3.49	4.00	3.25
L0001770	0	0.13440E-06	NO	NO	465260.7	3810585.2	1051.0	3.49	4.00	3.25
L0001771	0	0.13440E-06	NO	NO	465269.2	3810585.2	1051.0	3.49	4.00	3.25
L0001772	0	0.13440E-06	NO	NO	465277.8	3810585.2	1051.0	3.49	4.00	3.25
L0001773	0	0.13440E-06	NO	NO	465286.4	3810585.1	1050.8	3.49	4.00	3.25
L0001774	0	0.13440E-06	NO	NO	465295.0	3810585.1	1050.5	3.49	4.00	3.25
L0001775	0	0.13440E-06	NO	NO	465303.6	3810585.1	1050.2	3.49	4.00	3.25
L0001776	0	0.13440E-06	NO	NO	465312.2	3810585.1	1050.0	3.49	4.00	3.25
L0001777	0	0.13440E-06	NO	NO	465320.8	3810585.1	1050.0	3.49	4.00	3.25
L0001778	0	0.13440E-06	NO	NO	465329.4	3810585.0	1050.0	3.49	4.00	3.25
L0001779	0	0.13440E-06	NO	NO	465338.0	3810585.0	1050.0	3.49	4.00	3.25
L0001780	0	0.13440E-06	NO	NO	465346.6	3810585.0	1050.0	3.49	4.00	3.25
L0001781	0	0.13440E-06	NO	NO	465355.1	3810585.0	1050.0	3.49	4.00	3.25
L0001782	0	0.13440E-06	NO	NO	465363.7	3810584.9	1050.0	3.49	4.00	3.25
L0001783	0	0.13440E-06	NO	NO	465372.3	3810584.9	1049.9	3.49	4.00	

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      3.25     NO                    NO
1880  L0001784         0   0.13440E-06  465380.9 3810584.9  1049.6     3.49     4.00
      3.25     NO                    NO
1881  L0001785         0   0.13440E-06  465389.5 3810584.9  1049.4     3.49     4.00
      3.25     NO                    NO
1882  L0001786         0   0.13440E-06  465398.1 3810584.9  1049.1     3.49     4.00
      3.25     NO                    NO
1883  L0001787         0   0.13440E-06  465406.7 3810584.8  1049.0     3.49     4.00
      3.25     NO                    NO
1884  L0001788         0   0.13440E-06  465415.3 3810584.8  1049.0     3.49     4.00
      3.25     NO                    NO
1885  L0001789         0   0.13440E-06  465423.9 3810584.8  1049.0     3.49     4.00
      3.25     NO                    NO
1886  L0001790         0   0.13440E-06  465432.5 3810584.8  1048.9     3.49     4.00
      3.25     NO                    NO
1887  L0001791         0   0.13440E-06  465441.0 3810584.8  1048.6     3.49     4.00
      3.25     NO                    NO
1888  L0001792         0   0.13440E-06  465449.6 3810584.7  1048.4     3.49     4.00
      3.25     NO                    NO
1889  L0001793         0   0.13440E-06  465458.2 3810584.7  1048.1     3.49     4.00
      3.25     NO                    NO
1890  L0001794         0   0.13440E-06  465466.8 3810584.7  1048.0     3.49     4.00
      3.25     NO                    NO
1891  L0001795         0   0.13440E-06  465475.4 3810584.7  1048.0     3.49     4.00
      3.25     NO                    NO
1892  L0001796         0   0.65390E-08  465130.9 3810585.5  1053.0     3.49     4.00
      3.25     NO                    NO
1893  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/24/26
1894   *** AERMET - VERSION  19191 ***
       ***                                                              ***
       14:55:07
1895
                                PAGE  13
1896  *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
1897
1898
1899                                                  *** VOLUME SOURCE DATA ***
1900
1901                NUMBER EMISSION RATE                      BASE    RELEASE    INIT.
                    INIT.   URBAN  EMISSION RATE   AIRCRAFT
1902      SOURCE     PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY
          SZ     SOURCE  SCALAR VARY
1903        ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
            (METERS)              BY
1904  - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      - - - - - - - - - - - - - - - - - - -
1905
1906  L0001797         0   0.65390E-08  465122.3 3810585.6  1053.0     3.49     4.00
      3.25     NO                    NO
1907  L0001798         0   0.65390E-08  465113.8 3810585.7  1053.0     3.49     4.00
      3.25     NO                    NO
1908  L0001799         0   0.65390E-08  465105.2 3810585.7  1053.0     3.49     4.00
      3.25     NO                    NO
1909  L0001800         0   0.65390E-08  465096.6 3810585.8  1053.1     3.49     4.00
      3.25     NO                    NO
1910  L0001801         0   0.65390E-08  465088.0 3810585.8  1053.4     3.49     4.00
      3.25     NO                    NO
1911  L0001802         0   0.65390E-08  465079.4 3810585.9  1053.7     3.49     4.00
      3.25     NO                    NO
1912  L0001803         0   0.65390E-08  465070.8 3810585.9  1054.0     3.49     4.00
      3.25     NO                    NO
1913  L0001804         0   0.65390E-08  465062.2 3810586.0  1054.0     3.49     4.00
      3.25     NO                    NO
1914  L0001805         0   0.65390E-08  465053.6 3810586.1  1054.0     3.49     4.00
      3.25     NO                    NO
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 L0001806         0   0.65390E-08  465045.0 3810586.1  1054.0     3.49     4.00
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 L0001807         0   0.65390E-08  465036.5 3810586.2  1054.1     3.49     4.00
     3.25     NO                       NO
 L0001808         0   0.65390E-08  465027.9 3810586.2  1054.4     3.49     4.00
     3.25     NO                       NO
 L0001809         0   0.65390E-08  465019.3 3810586.3  1054.7     3.49     4.00
     3.25     NO                       NO
 L0001810         0   0.65390E-08  465010.7 3810586.3  1055.0     3.49     4.00
     3.25     NO                       NO
 L0001811         0   0.65390E-08  465002.1 3810586.4  1055.0     3.49     4.00
     3.25     NO                       NO
 L0001812         0   0.65390E-08  464993.5 3810586.5  1055.0     3.49     4.00
     3.25     NO                       NO
 L0001813         0   0.65390E-08  464984.9 3810586.5  1055.0     3.49     4.00
     3.25     NO                       NO
 L0001814         0   0.65390E-08  464976.3 3810586.6  1055.0     3.49     4.00
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 L0001816         0   0.65390E-08  464959.1 3810586.7  1055.0     3.49     4.00
     3.25     NO                       NO
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     3.25     NO                       NO
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 L0001819         0   0.65390E-08  464941.9 3810578.5  1055.5     3.49     4.00
     3.25     NO                       NO
 L0001820         0   0.65390E-08  464942.2 3810569.9  1055.6     3.49     4.00
     3.25     NO                       NO
 L0001821         0   0.65390E-08  464942.4 3810561.4  1055.9     3.49     4.00
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 L0001822         0   0.65390E-08  464943.9 3810553.0  1056.0     3.49     4.00
     3.25     NO                       NO
 L0001823         0   0.65390E-08  464946.3 3810544.7  1056.0     3.49     4.00
     3.25     NO                       NO
 L0001824         0   0.26400E-07  465073.8 3810558.3  1054.0     3.49     4.00
     3.25     NO                       NO
 L0001825         0   0.26400E-07  465073.7 3810566.9  1054.0     3.49     4.00
     3.25     NO                       NO
 L0001826         0   0.26400E-07  465073.6 3810575.4  1053.9     3.49     4.00
     3.25     NO                       NO
 L0001827         0   0.26400E-07  465073.5 3810584.0  1053.9     3.49     4.00
     3.25     NO                       NO
 L0001828         0   0.26400E-07  465080.1 3810585.9  1053.7     3.49     4.00
     3.25     NO                       NO
 L0001829         0   0.26400E-07  465088.7 3810585.8  1053.4     3.49     4.00
     3.25     NO                       NO
 L0001830         0   0.26400E-07  465097.3 3810585.8  1053.1     3.49     4.00
     3.25     NO                       NO
 L0001831         0   0.26400E-07  465105.9 3810585.7  1053.0     3.49     4.00
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 L0001832         0   0.26400E-07  465114.5 3810585.7  1053.0     3.49     4.00
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 L0001833         0   0.26400E-07  465123.1 3810585.6  1053.0     3.49     4.00
     3.25     NO                       NO
 L0001834         0   0.26400E-07  465131.7 3810585.5  1052.9     3.49     4.00
     3.25     NO                       NO
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 14:55:07

                                PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
```

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0001397 , L0001398 , L0001399 , L0001400 , L0001401 , L0001402 , L0001403 , L0001404 ,
	L0001405 , L0001406 , L0001407 , L0001408 , L0001409 , L0001410 , L0001411 , L0001412 ,
	L0001413 , L0001414 , L0001415 , L0001416 , L0001417 , L0001418 , L0001419 , L0001420 ,
	L0001421 , L0001422 , L0001423 , L0001424 , L0001425 , L0001426 , L0001427 , L0001428 ,
	L0001429 , L0001430 , L0001431 , L0001432 , L0001433 , L0001434 , L0001435 , L0001436 ,
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	L0001875 , L0001876 , L0001877 , L0001878 , L0001879 , L0001880 , L0001881 , L0001882 ,
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	L0001891 , L0001892 , L0001893 , L0001894 , L0001895 , L0001896 , L0001897 , L0001898 ,
	L0001899 , L0001900 , L0001901 , L0001902 , L0001903 , L0001904 , L0001905 , L0001906 ,
	L0001907 , L0001908 , L0001909 , L0001910 , L0001911 , L0001912 , L0001913 , L0001914 ,
	L0001915 , L0001916 , L0001917 , L0001918 , L0001919 , L0001920 , L0001921 , L0001922 ,
	L0001923 , L0001924 , L0001925 , L0001926 , L0001927 , L0001928 , L0001929 , L0001930 ,
	L0001931 , L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 ,
	L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 ,
	L0001947 , L0001948 , L0001949 , L0001950 , L0001951 ,

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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	L0001963 , L0001964 , L0001965 , L0001966 , L0001967 , L0001968 , L0001969 , L0001970 ,
	L0001971 , L0001972 , L0001973 , L0001974 , L0001975 , L0001976 , L0001977 , L0001978 ,
	L0001979 , L0001980 , L0001981 , L0001982 , L0001983 , L0001984 , L0001985 , L0001986 ,
	L0001987 , L0001988 , L0001989 , L0001990 , L0001991 , L0001992 , L0001993 , L0001994 ,
	L0001995 , L0001996 , L0001997 , L0001998 , L0001999 , L0002000 , L0002001 , L0002002 ,
	L0002003 , L0002004 , L0002005 , L0002006 , L0002007 , L0002008 , L0002009 , L0002010 ,
	L0002011 , L0002012 , L0002013 , L0002014 , L0002015 , L0002016 , L0002017 , L0002018 ,
	L0002019 , L0002020 , L0002021 , L0002022 , L0002023 , L0002024 , L0002025 , L0002026 ,
	L0002027 , L0002028 , L0002029 , L0002030 , L0002031 , L0002032 , L0002033 , L0002034 ,
	L0002035 , L0002036 , L0002037 , L0002038 , L0002039 , L0002040 , L0002041 , L0002042 ,
	L0002043 , L0002044 , L0002045 , L0002046 , L0002047 , L0002048 , L0002049 , L0002050 ,
	L0002051 , L0002052 , L0002053 , L0002054 , L0002055 , L0002056 , L0002057 , L0002058 ,
	L0002059 , L0002060 , L0002061 , L0002062 , L0002063 , L0002064 , L0002065 , L0002066 ,
	L0002067 , L0002068 , L0002069 , L0002070 , L0002071 , L0002072 , L0002073 , L0002074 ,
	L0002075 , L0002076 , L0002077 , L0002078 , L0002079 , L0002080 , L0002081 , L0002082 ,
	L0002083 , L0002084 , L0002085 , L0002086 , L0002087 ,

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2041          L0002091    , L0002092    , L0002093    , L0002094    , L0002095    ,
              L0002096    , L0002097    , L0002098    ,
2042
2043          L0002099    , L0002100    , L0002101    , L0002102    , L0002103    ,
              L0002104    , L0002105    , L0002106    ,
2044
2045          L0002107    , L0002108    , L0002109    , L0002110    , L0002111    ,
              L0002112    , L0002113    , L0002114    ,
2046  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/24/26
2047   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       14:55:07
2048
                                  PAGE  16
2049   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
2050
2051
2052                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***
2053
2054   SRCGROUP ID                                              SOURCE IDs
2055   -----------                                              ----------
2056
2057
2058          L0002115    , L0002116    , L0002117    , L0002118    , L0002119    ,
              L0002120    , L0002121    , L0002122    ,
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2060          L0002123    , L0002124    , L0002125    , L0002126    , L0002127    ,
              L0002128    , L0002129    , L0002130    ,
2061
2062          L0002131    , L0001734    , L0001735    , L0001736    , L0001737    ,
              L0001738    , L0001739    , L0001740    ,
2063
2064          L0001741    , L0001742    , L0001743    , L0001744    , L0001745    ,
              L0001746    , L0001747    , L0001748    ,
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2066          L0001749    , L0001750    , L0001751    , L0001752    , L0001753    ,
              L0001754    , L0001755    , L0001756    ,
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2068          L0001757    , L0001758    , L0001759    , L0001760    , L0001761    ,
              L0001762    , L0001763    , L0001764    ,
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2070          L0001765    , L0001766    , L0001767    , L0001768    , L0001769    ,
              L0001770    , L0001771    , L0001772    ,
2071
2072          L0001773    , L0001774    , L0001775    , L0001776    , L0001777    ,
              L0001778    , L0001779    , L0001780    ,
2073
2074          L0001781    , L0001782    , L0001783    , L0001784    , L0001785    ,
              L0001786    , L0001787    , L0001788    ,
2075
2076          L0001789    , L0001790    , L0001791    , L0001792    , L0001793    ,
              L0001794    , L0001795    , L0001796    ,
2077
2078          L0001797    , L0001798    , L0001799    , L0001800    , L0001801    ,
              L0001802    , L0001803    , L0001804    ,
2079
2080          L0001805    , L0001806    , L0001807    , L0001808    , L0001809    ,
              L0001810    , L0001811    , L0001812    ,
2081
2082          L0001813    , L0001814    , L0001815    , L0001816    , L0001817    ,
              L0001818    , L0001819    , L0001820    ,
2083
2084          L0001821    , L0001822    , L0001823    , L0001824    , L0001825    ,
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*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK1

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	14.6,	438.7,	196.9,	-191.2,	194.5,	2	14.6,	440.3,	262.6,	-256.1,	175.2,
3	14.6,	428.4,	320.3,	-313.2,	150.7,	4	14.6,	403.5,	368.2,	-360.9,	121.6,
5	14.6,	366.4,	405.0,	-397.5,	88.8,	6	14.6,	318.1,	429.4,	-422.1,	53.3,
7	14.6,	260.2,	440.8,	-433.8,	16.2,	8	14.6,	194.4,	438.8,	-432.4,	-21.5,
9	14.6,	128.0,	425.8,	-419.7,	-59.2,	10	14.6,	196.9,	438.7,	-413.8,	-92.8,
11	14.6,	262.6,	440.3,	-395.4,	-124.8,	12	14.6,	320.3,	428.4,	-364.9,	-153.1,
13	14.6,	368.2,	403.5,	-323.4,	-176.8,	14	14.6,	405.0,	366.4,	-272.0,	-195.0,
15	14.6,	429.4,	318.1,	-212.4,	-207.4,	16	14.6,	440.8,	260.2,	-146.3,	-213.4,
17	14.6,	438.8,	194.4,	-75.7,	-213.0,	18	14.6,	425.8,	128.0,	-4.8,	-206.8,
19	14.6,	438.7,	196.9,	-5.7,	-194.5,	20	14.6,	440.3,	262.6,	-6.5,	-175.2,
21	14.6,	428.4,	320.3,	-7.0,	-150.7,	22	14.6,	403.5,	368.2,	-7.3,	-121.6,
23	14.6,	366.4,	405.0,	-7.5,	-88.8,	24	14.6,	318.1,	429.4,	-7.3,	-53.3,
25	14.6,	260.2,	440.8,	-7.0,	-16.2,	26	14.6,	194.4,	438.8,	-6.5,	21.5,
27	14.6,	128.0,	425.8,	-6.1,	59.2,	28	14.6,	196.9,	438.7,	-24.9,	92.8,
29	14.6,	262.6,	440.3,	-44.9,	124.8,	30	14.6,	320.3,	428.4,	-63.5,	153.1,
31	14.6,	368.2,	403.5,	-80.2,	176.8,	32	14.6,	405.0,	366.4,	-94.4,	195.0,
33	14.6,	429.4,	318.1,	-105.8,	207.4,	34	14.6,	440.8,	260.2,	-114.0,	213.4,
35	14.6,	438.8,	194.4,	-118.6,	213.0,	36	14.6,	425.8,	128.0,	-123.2,	206.8,

SOURCE ID: STCK2

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	14.6,	438.7,	196.9,	-189.8,	188.4,	2	14.6,	440.3,	262.6,	-253.7,	169.6,
3	14.6,	428.4,	320.3,	-309.9,	145.5,	4	14.6,	403.5,	368.2,	-356.7,	117.1,
5	14.6,	366.4,	405.0,	-392.6,	85.1,	6	14.6,	318.1,	429.4,	-416.6,	50.5,

```
      7   14.6,  260.2,  440.8, -427.9,   14.4,      8   14.6,  194.4,  438.8, -426.2,
     -22.2,
      9   14.6,  128.0,  425.8, -413.5,  -58.9,     10   14.6,  196.9,  438.7, -407.8,
     -91.4,
     11   14.6,  262.6,  440.3, -389.7, -122.4,     12   14.6,  320.3,  428.4, -359.7,
     -149.8,
     13   14.6,  368.2,  403.5, -318.9, -172.6,     14   14.6,  405.0,  366.4, -268.3,
     -190.1,
     15   14.6,  429.4,  318.1, -209.5, -201.9,     16   14.6,  440.8,  260.2, -144.5,
     -207.5,
     17   14.6,  438.8,  194.4,  -75.0, -206.8,     18   14.6,  425.8,  128.0,   -5.1,
     -200.6,
     19   14.6,  438.7,  196.9,   -7.1, -188.4,     20   14.6,  440.3,  262.6,   -8.9,
     -169.6,
     21   14.6,  428.4,  320.3,  -10.4, -145.5,     22   14.6,  403.5,  368.2,  -11.6,
     -117.1,
     23   14.6,  366.4,  405.0,  -12.4,  -85.1,     24   14.6,  318.1,  429.4,  -12.8,
     -50.5,
     25   14.6,  260.2,  440.8,  -12.9,  -14.4,     26   14.6,  194.4,  438.8,  -12.6,
     22.2,
     27   14.6,  128.0,  425.8,  -12.2,   58.9,     28   14.6,  196.9,  438.7,  -30.9,
     91.4,
     29   14.6,  262.6,  440.3,  -50.6,  122.4,     30   14.6,  320.3,  428.4,  -68.7,
     149.8,
     31   14.6,  368.2,  403.5,  -84.7,  172.6,     32   14.6,  405.0,  366.4,  -98.1,
     190.1,
     33   14.6,  429.4,  318.1, -108.6,  201.9,     34   14.6,  440.8,  260.2, -115.8,
     207.5,
     35   14.6,  438.8,  194.4, -119.4,  206.8,     36   14.6,  425.8,  128.0, -122.8,
     200.6,

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW7) *

 SOURCE ID = STCK1        ; SOURCE TYPE = POINT    :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
     .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
     .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
 .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = THURSDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = FRIDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***
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                                PAGE  19
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
                   WEEK (HRDOW7) *

 SOURCE ID = STCK2        ; SOURCE TYPE = POINT    :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = MONDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .1000E+01   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
    17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = TUESDAY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
 .0000E+00   15  .0000E+00   16  .0000E+00
     17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
 .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = WEDNESDY
  1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
 .0000E+00    7  .0000E+00    8  .0000E+00
  9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
```

```
          .0000E+00   15  .0000E+00   16  .0000E+00
2197      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
2198                                                DAY OF WEEK = THURSDAY
2199       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
2200       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
2201      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
2202                                                DAY OF WEEK = FRIDAY
2203       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
2204       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
2205      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
2206                                                DAY OF WEEK = SATURDAY
2207       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
2208       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
2209      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
2210                                                DAY OF WEEK = SUNDAY
2211       1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
          .0000E+00    7  .0000E+00    8  .0000E+00
2212       9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
          .0000E+00   15  .0000E+00   16  .0000E+00
2213      17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
          .0000E+00   23  .0000E+00   24  .0000E+00
2214  FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
      Palmetto Industrial\14848 ***        03/24/26
2215   *** AERMET - VERSION  19191 ***
       ***                                                                    ***
       14:55:07
2216
                                  PAGE  20
2217   *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
2218
2219                                          *** DISCRETE CARTESIAN RECEPTORS ***
2220                                        (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
2221                                                    (METERS)
2222
2223       ( 464506.9, 3810141.6,    1063.0,    1063.0,       0.0);         ( 465481.2,
          3810503.5,    1049.8,    1049.8,       0.0);
2224       ( 465406.4, 3810503.0,    1050.6,    1050.6,       0.0);         ( 465212.7,
          3810456.2,    1053.0,    1053.0,       0.0);
2225       ( 464952.4, 3810455.7,    1056.0,    1056.0,       0.0);         ( 465964.7,
          3810432.9,    1048.0,    1048.0,       0.0);
2226       ( 465963.2, 3810384.6,    1048.2,    1048.2,       0.0);         ( 465974.5,
          3810476.1,    1047.0,    1047.0,       0.0);
2227       ( 466001.9, 3810516.5,    1046.0,    1046.0,       0.0);         ( 466028.4,
          3810558.2,    1044.9,    1044.9,       0.0);
2228       ( 466054.6, 3810598.8,    1044.0,    1044.0,       0.0);         ( 466136.4,
          3810670.0,    1042.0,    1042.0,       0.0);
2229       ( 466136.4, 3810635.9,    1042.1,    1042.1,       0.0);         ( 466074.3,
          3810786.8,    1040.2,    1040.2,       0.0);
2230       ( 465468.5, 3810751.9,    1045.5,    1045.5,       0.0);         ( 465266.0,
          3810753.5,    1049.2,    1049.2,       0.0);
2231       ( 465112.4, 3810808.1,    1050.6,    1050.6,       0.0);         ( 465314.5,
          3810854.3,    1047.0,    1047.0,       0.0);
2232       ( 465221.8, 3810854.6,    1048.9,    1048.9,       0.0);         ( 463382.5,
          3811176.2,    1061.1,    1061.1,       0.0);
2233       ( 463250.8, 3811177.8,    1062.2,    1062.2,       0.0);         ( 463278.3,
          3810876.7,    1065.2,    1065.2,       0.0);
```

```
2234        ( 465601.6, 3810943.3,    1041.0,    1041.0,       0.0);         ( 464507.2,
            3809995.0,    1066.5,    1066.5,       0.0);
2235        ( 464508.1, 3809810.8,    1068.8,    1068.8,       0.0);         ( 464509.8,
            3809672.1,    1070.3,    1070.3,       0.0);
2236        ( 464700.5, 3809701.5,    1068.0,    1068.0,       0.0);         ( 464701.3,
            3809618.0,    1069.3,    1069.3,       0.0);
2237        ( 464755.4, 3809565.3,    1069.5,    1069.5,       0.0);         ( 465246.9,
            3809566.2,    1067.0,    1067.0,       0.0);
2238        ( 464785.6, 3809489.1,    1070.3,    1070.3,       0.0);         ( 464694.0,
            3809505.2,    1071.0,    1071.0,       0.0);
2239        ( 464989.3, 3810696.8,    1054.0,    1054.0,       0.0);         ( 467840.7,
            3810027.9,    1029.9,    1029.9,       0.0);
2240        ( 467774.0, 3809972.0,    1031.9,    1031.9,       0.0);         ( 467765.1,
            3810268.7,    1027.6,    1027.6,       0.0);
2241        ( 467360.5, 3810321.9,    1033.9,    1033.9,       0.0);         ( 467361.2,
            3810282.3,    1034.7,    1034.7,       0.0);
2242        ( 467962.7, 3811258.2,    1013.3,    1013.3,
            0.0);
2243   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/24/26
2244    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        14:55:07
2245
                                    PAGE  21
2246    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
2247
2248                                          *** METEOROLOGICAL DAYS SELECTED FOR
                                              PROCESSING ***
2249                                                        (1=YES; 0=NO)
2250
2251              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
2252              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
2253              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
2254              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
2255              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
2256              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
2257              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
                  1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
2258              1 1 1 1 1 1 1 1 1 1   1 1 1 1 1
2259
2260                  NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT
                      IS INCLUDED IN THE DATA FILE.
2261
2262
2263
2264                                     *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
                                         CATEGORIES ***
2265                                                   (METERS/SEC)
2266
2267                                                1.54,   3.09,   5.14,   8.23,  10.80,
2268   FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
       Palmetto Industrial\14848 ***        03/24/26
2269    *** AERMET - VERSION  19191 ***
        ***                                                                    ***
        14:55:07
2270
                                    PAGE  22
2271    *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
2272
```

2273 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

2274

2275 Surface file:
KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
Met Version: 19191
2276 Profile file:
KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
2277 Surface format:
FREE

2278 Profile format:
FREE

2279 Surface station no.: 23161 Upper air station no.: 3120
2280 Name: DAGGETT/FAA_AIRPORT Name:
UNKNOWN
2281 Year: 2015 Year: 2015
2282

2283 First 24 hours of scalar data
2284 YR MO DY JDY HR H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO
REF WS WD HT REF TA HT
2285 - - -

```
 15 01 01   1 22  -19.5  0.199 -9.000 -9.000 -999.  214.     43.7  0.02   4.18   1.00
 3.36  262.   10.0  272.0    2.0
 15 01 01   1 23  -18.8  0.192 -9.000 -9.000 -999.  202.     40.5  0.04   4.18   1.00
 2.86  230.   10.0  272.0    2.0
 15 01 01   1 24  -28.1  0.287 -9.000 -9.000 -999.  370.     90.9  0.02   4.18   1.00
 4.86  270.   10.0  272.0    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 15 01 01 01   10.0 1  251.    4.27   272.6   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
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*** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                              *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES
                              FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     L0001397    , L0001398    ,
                                  L0001399    , L0001400    , L0001401    ,
                 L0001402    , L0001403    , L0001404    , L0001405    , L0001406    ,
                 L0001407    , L0001408    , L0001409    ,
                 L0001410    , L0001411    , L0001412    , L0001413    , L0001414    ,
                 L0001415    , L0001416    , L0001417    ,
                 L0001418    , L0001419    , L0001420    , L0001421    , L0001422    ,
                 L0001423    , L0001424    ,  . . .      ,

                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                     ** CONC OF DPM      IN
                                     MICROGRAMS/M**3                          **

      X-COORD (M)   Y-COORD (M)        CONC                       X-COORD (M)   Y-COORD
      (M)        CONC
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        464506.90    3810141.57        0.00005                      465481.17
        3810503.53        0.00083
        465406.43    3810503.02        0.00076                      465212.73
        3810456.25        0.00041
        464952.43    3810455.74        0.00018                      465964.71
        3810432.92        0.00077
        465963.18    3810384.60        0.00057                      465974.54
        3810476.13        0.00099
        466001.90    3810516.53        0.00115                      466028.40
        3810558.19        0.00122
        466054.63    3810598.78        0.00118                      466136.44
        3810669.97        0.00084
        466136.44    3810635.94        0.00090                      466074.30
        3810786.75        0.00059
        465468.45    3810751.95        0.00061                      465265.95
        3810753.49        0.00043
        465112.36    3810808.15        0.00031                      465314.53
        3810854.32        0.00033
        465221.79    3810854.63        0.00029                      463382.51
        3811176.23        0.00002
        463250.80    3811177.76        0.00002                      463278.26
        3810876.71        0.00001
        465601.63    3810943.28        0.00017                      464507.22
        3809995.00        0.00005
```

```
           464508.08    3809810.84        0.00006                        464509.81
           3809672.08         0.00006
           464700.45    3809701.47        0.00017                        464701.32
           3809618.04         0.00016
           464755.36    3809565.30        0.00037                        465246.88
           3809566.17         0.00026
           464785.59    3809489.06        0.00012                        464694.05
           3809505.22         0.00010
           464989.27    3810696.82        0.00022                        467840.66
           3810027.92         0.00009
           467774.00    3809972.05        0.00009                        467765.08
           3810268.74         0.00010
           467360.52    3810321.90        0.00014                        467361.23
           3810282.35         0.00014
           467962.68    3811258.22
           0.00004

FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848
Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***
 14:55:07

                                PAGE  24
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                      *** THE SUMMARY OF MAXIMUM PERIOD ( 43848 HRS)
                                      RESULTS ***


                                    ** CONC OF DPM      IN
                                    MICROGRAMS/M**3                          **


                     NETWORK
GROUP ID                        AVERAGE CONC                RECEPTOR  (XR, YR, ZELEV,
ZHILL, ZFLAG)  OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

ALL       1ST HIGHEST VALUE IS       0.00122 AT (  466028.40,  3810558.19,  1044.94,
1044.94,    0.00)  DC
          2ND HIGHEST VALUE IS       0.00118 AT (  466054.63,  3810598.78,  1044.00,
          1044.00,    0.00)  DC
          3RD HIGHEST VALUE IS       0.00115 AT (  466001.90,  3810516.53,  1045.95,
          1045.95,    0.00)  DC
          4TH HIGHEST VALUE IS       0.00099 AT (  465974.54,  3810476.13,  1046.95,
          1046.95,    0.00)  DC
          5TH HIGHEST VALUE IS       0.00090 AT (  466136.44,  3810635.94,  1042.15,
          1042.15,    0.00)  DC
          6TH HIGHEST VALUE IS       0.00084 AT (  466136.44,  3810669.97,  1042.00,
          1042.00,    0.00)  DC
          7TH HIGHEST VALUE IS       0.00083 AT (  465481.17,  3810503.53,  1049.76,
          1049.76,    0.00)  DC
          8TH HIGHEST VALUE IS       0.00077 AT (  465964.71,  3810432.92,  1048.02,
          1048.02,    0.00)  DC
          9TH HIGHEST VALUE IS       0.00076 AT (  465406.43,  3810503.02,  1050.60,
          1050.60,    0.00)  DC
         10TH HIGHEST VALUE IS       0.00061 AT (  465468.45,  3810751.95,  1045.47,
         1045.47,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
```

```
FF *** AERMOD - VERSION 24142  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 ***        03/24/26
 *** AERMET - VERSION  19191 ***
 ***                                                                                ***
 14:55:07

                                PAGE  25
*** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            6 Warning Message(s)
A Total of          637 Informational Message(s)

A Total of        43848 Hours Were Processed

A Total of          191 Calm Hours Identified

A Total of          446 Missing Hours Identified (  1.02 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
SO W320    1103        PPARM: Input Parameter May Be Out-of-Range for Parameter            VS
SO W320    1104        PPARM: Input Parameter May Be Out-of-Range for Parameter            VS
ME W186    1245       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used           0.50
ME W187    1245       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450   17545       CHKDAT: Record Out of Sequence in Meteorological File at: 18010101
MX W450   17545       CHKDAT: Record Out of Sequence in Meteorological File at:    1 year gap

   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

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APPENDIX 2.3:

RISK CALCULATION

Construction Risk

Receptor No.	Age Bin	DPM Conc. (µg/m^3)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk								
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
1	0 to 2	0.01429	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	1.1E-05	1.55	5.0E+00	1.4E-03	2.9E-03						
												Total	1.55			2.9E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2 (MEIR)	0 to 2	0.01575	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	1.2E-05	1.71	5.0E+00	1.4E-03	3.2E-03						
												Total	1.71			3.2E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3	0 to 2	0.00216	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	1.6E-06	0.23	5.0E+00	1.4E-03	4.3E-04						
												Total	0.23			4.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4	0 to 2	0.00439	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.3E-06	0.48	5.0E+00	1.4E-03	8.8E-04						
												Total	0.48			8.8E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5	0 to 2	0.00485	250	1.07	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.6E-06	0.58	5.0E+00	1.4E-03	9.7E-04						
												Total	0.58			9.7E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6 (MEIW)	16 to 41	0.02299	250	0.97	230	1	70	1.00	1	3.0E-04	1.1E+00	3.6E-06	0.05	5.0E+00	1.4E-03	4.6E-03						
												Total	0.05			4.6E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

Operational Risk

Receptor No.	Age Bin	DPM Conc. (µg/m^3)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk							
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
1	-0.25 to 0	0.00043	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	1.5E-07	0.00	5.0E+00	1.4E-03	8.6E-05						
	0 to 2	0.00043	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	4.5E-07	0.11	5.0E+00	1.4E-03	8.6E-05						
	2 to 16	0.00043	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	2.4E-07	0.11	5.0E+00	1.4E-03	8.6E-05						
	16 to 30	0.00043	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	1.1E-07	0.02	5.0E+00	1.4E-03	8.6E-05						
												Total	0.24			8.6E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2 (MEIR)	-0.25 to 0	0.00061	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	2.1E-07	0.01	5.0E+00	1.4E-03	1.2E-04						
	0 to 2	0.00061	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	6.4E-07	0.16	5.0E+00	1.4E-03	1.2E-04						
	2 to 16	0.00061	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	3.3E-07	0.15	5.0E+00	1.4E-03	1.2E-04						
	16 to 30	0.00061	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	1.5E-07	0.02	5.0E+00	1.4E-03	1.2E-04						
												Total	0.34			1.2E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3	-0.25 to 0	0.00059	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	2.0E-07	0.01	5.0E+00	1.4E-03	1.2E-04						
	0 to 2	0.00059	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	6.2E-07	0.16	5.0E+00	1.4E-03	1.2E-04						
	2 to 16	0.00059	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	3.2E-07	0.15	5.0E+00	1.4E-03	1.2E-04						
	16 to 30	0.00059	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	1.5E-07	0.02	5.0E+00	1.4E-03	1.2E-04						
												Total	0.33			1.2E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4	-0.25 to 0	0.00115	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	4.0E-07	0.01	5.0E+00	1.4E-03	2.3E-04						
	0 to 2	0.00115	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	1.2E-06	0.31	5.0E+00	1.4E-03	2.3E-04						
	2 to 16	0.00115	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	6.3E-07	0.29	5.0E+00	1.4E-03	2.3E-04						
	16 to 30	0.00115	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.9E-07	0.04	5.0E+00	1.4E-03	2.3E-04						
												Total	0.65			2.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5	-0.25 to 0	0.00029	350	0.25	361	1	70	0.85	10	3.0E-04	1.1E+00	1.0E-07	0.00	5.0E+00	1.4E-03	5.8E-05						
	0 to 2	0.00029	350	2	1090	1	70	0.85	10	3.0E-04	1.1E+00	3.0E-07	0.08	5.0E+00	1.4E-03	5.8E-05						
	2 to 16	0.00029	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	1.6E-07	0.07	5.0E+00	1.4E-03	5.8E-05						
	16 to 30	0.00029	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	7.3E-08	0.01	5.0E+00	1.4E-03	5.8E-05						
												Total	0.16			2.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6 (MEIW)	16 to 41	0.00083	250	25	230	1	70	1.00	1	3.0E-04	1.1E+00	1.3E-07	0.05	5.0E+00	1.4E-03	1.7E-04						
												Total	0.05			1.7E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

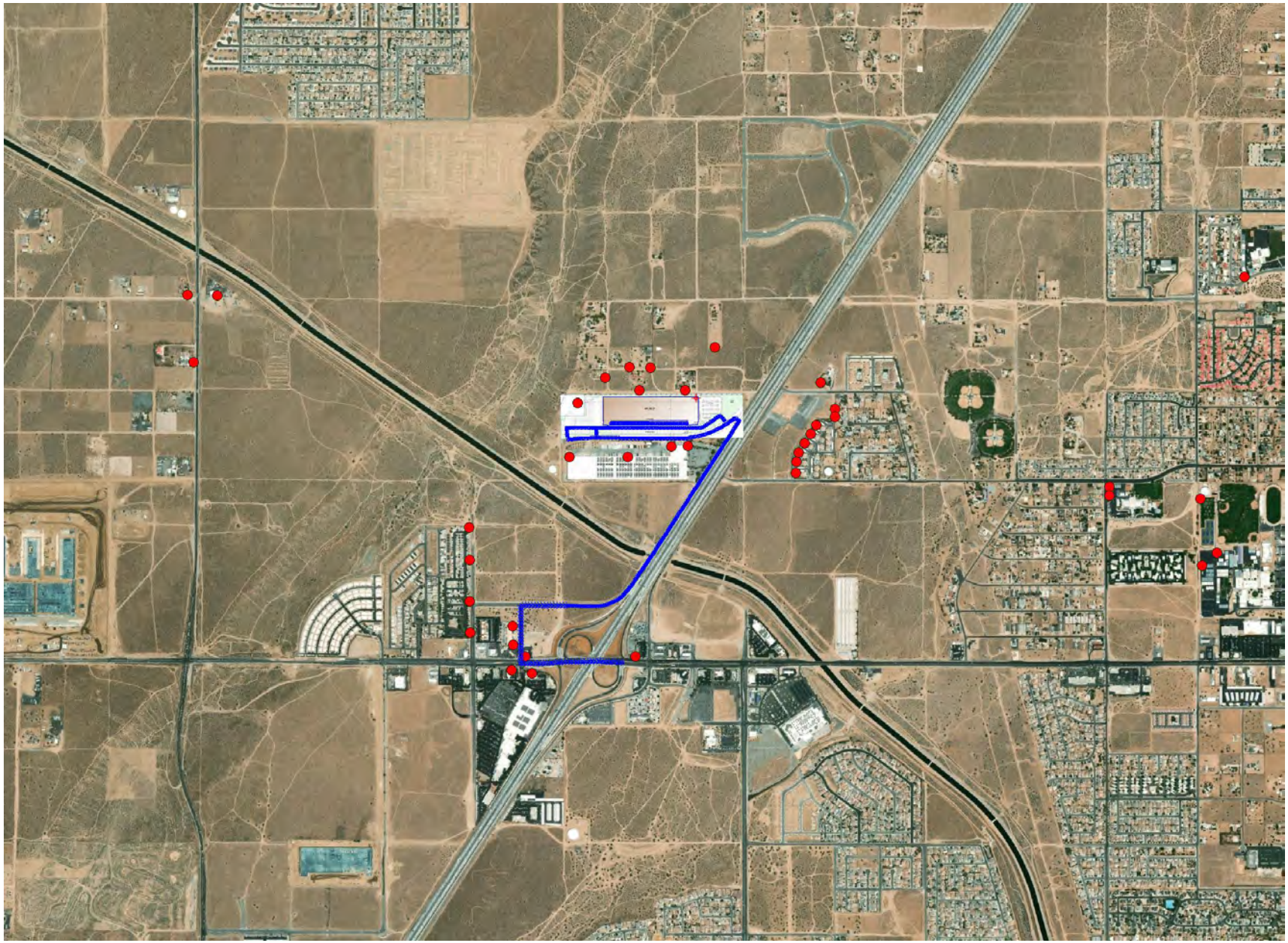
Combined Construction and Operational Risk

Receptor No.	Age Bin	DPM Conc. (µg/m^3)	Exposure Frequency (days)	Exposure Duration (years)	Inhalation Rate (L/kg-day)	Inhalation Absorption Factor	Averaging Time (years)	FAH	ASF	Cancer Risk				Non-Cancer Risk							
										URF	CPF	Dose	Risk (per million)	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	REPRO	EYES
1	0 to 2	0.01429	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	1.1E-05	1.55	5.0E+00	1.4E-03	2.9E-03						
	0 to 2	0.00043	350	1.03	1090	1	70	0.85	10	3.0E-04	1.1E+00	4.5E-07	0.06	5.0E+00	1.4E-03	8.6E-05						
	2 to 16	0.00043	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	2.4E-07	0.11	5.0E+00	1.4E-03	8.6E-05						
	16 to 30	0.00043	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	1.1E-07	0.02	5.0E+00	1.4E-03	8.6E-05						
												Total	1.73			2.9E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
2 (MEIR)	0 to 2	0.01575	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	1.2E-05	1.71	5.0E+00	1.4E-03	3.2E-03						
	0 to 2	0.00061	350	1.03	1090	1	70	0.85	10	3.0E-04	1.1E+00	6.4E-07	0.08	5.0E+00	1.4E-03	1.2E-04						
	2 to 16	0.00061	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	3.3E-07	0.15	5.0E+00	1.4E-03	1.2E-04						
	16 to 30	0.00061	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	1.5E-07	0.02	5.0E+00	1.4E-03	1.2E-04						
												Total	1.97			3.2E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
3	0 to 2	0.00216	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	1.6E-06	0.23	5.0E+00	1.4E-03	4.3E-04						
	0 to 2	0.00059	350	1.03	1090	1	70	0.85	10	3.0E-04	1.1E+00	6.2E-07	0.08	5.0E+00	1.4E-03	1.2E-04						
	2 to 16	0.00059	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	3.2E-07	0.15	5.0E+00	1.4E-03	1.2E-04						
	16 to 30	0.00059	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	1.5E-07	0.02	5.0E+00	1.4E-03	1.2E-04						
												Total	0.49			4.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
4	0 to 2	0.00439	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.3E-06	0.48	5.0E+00	1.4E-03	8.8E-04						
	0 to 2	0.00115	350	1.03	1090	1	70	0.85	10	3.0E-04	1.1E+00	1.2E-06	0.16	5.0E+00	1.4E-03	2.3E-04						
	2 to 16	0.00115	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	6.3E-07	0.29	5.0E+00	1.4E-03	2.3E-04						
	16 to 30	0.00115	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	2.9E-07	0.04	5.0E+00	1.4E-03	2.3E-04						
												Total	0.96			8.8E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
5	0 to 2	0.00485	250	0.97	1090	1	70	1.00	10	3.0E-04	1.1E+00	3.6E-06	0.53	5.0E+00	1.4E-03	9.7E-04						
	0 to 2	0.00029	350	1.03	1090	1	70	0.85	10	3.0E-04	1.1E+00	3.0E-07	0.04	5.0E+00	1.4E-03	5.8E-05						
	2 to 16	0.00029	350	14	572	1	70	0.72	3	3.0E-04	1.1E+00	1.6E-07	0.07	5.0E+00	1.4E-03	5.8E-05						
	16 to 30	0.00029	350	14	261	1	70	0.73	1	3.0E-04	1.1E+00	7.3E-08	0.01	5.0E+00	1.4E-03	5.8E-05						
												Total	0.65			1.1E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
6 (MEIW)	16 to 41	0.02299	250	0.97	230	1	70	1.00	1	3.0E-04	1.1E+00	3.6E-06	0.05	5.0E+00	1.4E-03	4.6E-03						
	16 to 41	0.00083	250	24.03	230	1	70	1.00	1	3.0E-04	1.1E+00	1.3E-07	0.05	5.0E+00	1.4E-03	1.7E-04						
												Total	0.10			4.6E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

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APPENDIX 2.4:

MODELED RECEPTORS



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Appendix C – Biological Resources Assessment Report

Amargosa Road & Palmetto Way Spec. Industrial Project
City of Hesperia, San Bernardino County, California

APN #: 0405-072-[52, 53, 55]

BIOLOGICAL RESOURCES ASSESSMENT REPORT

Prepared For:

Rachamim 5, LLC
Attention: Mr. Ramin Namvar
6001 E. Slauson Avenue
Commerce, CA 90040
Phone: 213.769.4222
ramin@titaniumfabrics.com

Prepared By:

CASC Engineering and Consulting, Inc.
27710 Jefferson Avenue, Suite 105
Temecula, California 92590
Contact: Kimberly Boydstun, Senior Biologist/Project Manager
Phone: 951.216.9933
Kboydstun@cascinc.com

October 2022

Amargosa Road & Palmetto Way Spec. Industrial Project
City of Hesperia, San Bernardino County, California

BIOLOGICAL RESOURCES ASSESSMENT REPORT

The undersigned certifies that this Report is a complete and accurate account of the findings and conclusions of a biological resources assessment for the above-referenced project.



Kimberly Boydstun
Senior Biologist/Project Manager

October 2022

Executive Summary

On behalf of Rachamim 5, LLC, CASC Engineering and Consulting (CASC) has prepared this Biological Resources Assessment Report for development of an industrial warehouse on vacant 30.52-acres in the City of Hesperia, San Bernardino County. California. The total Survey Area consisted of 45.61-acres in total [Project Site (30.52-acres) and a 500-foot buffer area]. The Project Site is undeveloped land. Project Impacts will occur on the entire 30.52-are Project Site. One (1) natural vegetation community, *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance, was observed and mapped within the boundaries of the Survey Area.

Based on the results of focused surveys and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that the Project Site has a low probability to support ayenia (*Ayenia compacta*) (CRPR 2B.3), Lincoln rockcress (*Boechera lincolnensis*) (CRPR 2B.3), Latimer's woodland-gilia (*Saltugilia latimeri*) (CRPR 1B.2), alkali mariposa-lily (*Calchortus striatus*) (CRPR 1B.2),pygmy poppy (*Canbya candida*) (CRPR 4.2), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) (CRPR 1B.2), Booth's evening primrose (*Eremothera boothii* ssp. *boothii*) (CRPR 2B.3), short-joint beavertail (*Opuntia basilaris* var. brachyclada) (CRPR 1B.2), and Parish's brittlescale (*Atriplex parishii*) (CRPR 1B.1). Focused surveys were conducted during the appropriate blooming season for each of these species (April – July). None of these special-status species were observed during the focused surveys. These species were absent during the spring/summer focused surveys and are therefore not expected to occur on the Project Site.

Western Joshua tree (State Listed-Candidate Species) was present on the Project Site. The location of fifty-two (52) live trees and seven (7) dead trees were recorded and are presented in this report. Relocation criteria (defined by CDFW) determined that thirty-one (31) of the Western Joshua trees meet the criteria for relocation. If Western Joshua tree can be incorporated into the Project Site landscape or avoided this would help to reduce the mitigation obligation. If avoidance of the Western Joshua Trees cannot be accompdated, then an Incidental Take Permit from CDFW must be acquired for Project development. CDFW will impose appropriate mitigation for "take" or disturbance of these trees.

Western burrowing owl (*Athene cunicularia*, SSC) is a locally significant species within San Bernardino County. Habitat conditions on the Project Site are suitable for burrowing owl. During the habitat assessment several burrows were noted of appropriate size to support this species at the Project Site. Focused surveys were conducted during the breeding season for this species (April, June, July and August 2022). Burrowing owl was absent from the Survey Area at the time of the surveys. No additional scat, pellets, or other sign was observed near the burrows or anywhere within the Survey Area to indicate occupation. As suitable habitat does exist at the Project Site a 14-30 day preconstruction survey for this species is recommended. This will ensure

that burrowing owl have not occupied the site since the focused surveys were conducted during the 2022 breeding season.

The Project Site is within the southern margin of the historical range of the Mohave ground squirrel (*Xerospermophilus mohavensis,* ST). Habitat conditions on the Project Site are suitable for Mohave ground squirrel and it was determined that this species has moderate potential of occurrence. Focused surveys were conducted for this species with a total of three trapping sessions which occurred during April, May, and June 2022. Mohave ground squirrel was not captured during the protocol level sessions and is not expected to occur at the Project Site. Implementation of the Project will not result in the loss of individual Mohave ground squirrel, nor will Project development adversely affect local or regional populations of these species.

The Survey Area has a low potential to support desert tortoise (*Gopherus agassizii*, FE/SE). While suitable habitat is present in the Survey Area, it is outside of the current known range for this species. Further, desert tortoise has not been recorded near the Project Site for many years. The local desert tortoise population has undergone severe declines over time. Focused surveys for desert tortoise were performed during April 2022. During the focused surveys no sign (scat, burrows, etc.) of this species was noted and this species is not expected to occur at the Project Site. Implementation of the Project will not result in the loss of individual desert tortoise, nor will Project development adversely affect local or regional populations of these species.

Finally, there is no U.S. Fish and Wildlife Service-designated critical habitat within the Survey Area, and there are no wetland or non-wetland jurisdictional features on the Project Site.

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LIST OF ACRONYMS AND ABBREVIATIONS

amsl	Above Mean Sea Level
CASC	CASC Engineering and Consulting, Inc.
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
°F	Fahrenheit
FESA	Federal Endangered Species Act
ft	Feet
IPaC	Information for Planning and Consultation online system
MCV	Manual of California Vegetation
MBTA	Migratory Bird Treaty Act
NWI	National Wetlands Inventory
Project	Amargosa Road and Palmetto Way Spec. Industrial Project
SSC	Species of Special Concern
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	California Department of Fish and Wildlife Watch List Species

Section 1 Introduction

On behalf of Rachamim 5, LLC, CASC Engineering and Consulting (CASC) has prepared this Biological Resources Assessment Report for development of an industrial warehouse on vacant parcels in Hesperia, California. This Report describes the biological resources, record searches and literature review, survey methodology, and results of the biological resources survey and review conducted for the Project.

1.1 PROJECT LOCATION

The Project is located on Palmetto Way, in Hesperia, San Bernardino County, California (Figure 1, Regional Vicinity). The property consists of three parcels, Accessor's Parcel Number: 0405-075-[52, 53,55] US Geological Society (USGS) 7.5-minute *Baldy Mesa SE* Quadrangle (Figure 2, USGS Quadrangle Map), Township 4 north, range 5 west, (latitude *117.3777327°W, longitude 34.4366696°N).*

1.2 PROJECT BACKGROUND AND DESCRIPTION

Rachamim 5, LLC proposes to construction of a 498,500 square foot Industrial Warehouse Building (Project) with up to 25,000 square feet of office space. The proposed Project will include 76 loading dock doors, 182 truck/trailer parking spaces and 281 auto parking spaces on three (3) parcels consisting of approximately 30.52 undeveloped acres within the City of Hesperia in the Regional Commercial Zone. The parcels are bounded on the north by Avenal Street, south by Palmetto Way, Amargosa Road and Interstate-15 to the east, and open space to the west. Three (3) entrances to the site are provided, one (1) on the east side from Palmetto Way, one (1) from Palmetto Way on the south side of the site, and a proposed third entrance/exit onto Palmetto Way from the truck/trailer parking area at the southwest corner of the site. The facility will be built on spec and will be designed to accommodate 500 to 600 employees; there is no tenant currently attached to the project. Project Site plans are provided in Appendix A, Conceptual Plans.

1.3 PURPOSE OF DOCUMENT

This Report documents all biological resources identified within the Survey Area during general biological resource survey conducted by CASC Biologists. The Survey Area included the Project Site plus a 500-foot buffer. The Survey Area was surveyed to determine the likelihood of State-listed and/or federally-listed rare, threatened, or endangered species, and other special-status[1] plants, animals, and natural communities (Figure 3, Photo Point Location Map). This Report includes an analysis of the potential for the Survey Area to support special-status plant and wildlife

[1] As used in this Report, "special-status" refers to plant and wildlife species that are federally-/State-listed, proposed, or candidates; plant species that have been designated a California Rare Plant Rank species by the California Native Plant Society; wildlife species that are designated by the California Department of Fish and Wildlife as Fully Protected, Species of Special Concern, or Watch List species; and State/locally rare vegetation communities.

species and special-status vegetation communities that have been previously recorded, or are known to occur within the vicinity, and that are subject to provisions of the Federal Endangered Species Act (FESA) of 1973, Migratory Bird Treaty Act (MBTA), California Endangered Species Act (CESA), California Environmental Quality Act (CEQA), California Fish and Game Code (CFGC), California Native Plant Protection Act, California Desert Native Plants Act (CDNPA), Bald and Golden Eagle Protection Act, and other local policies and ordinances protecting biological resources.

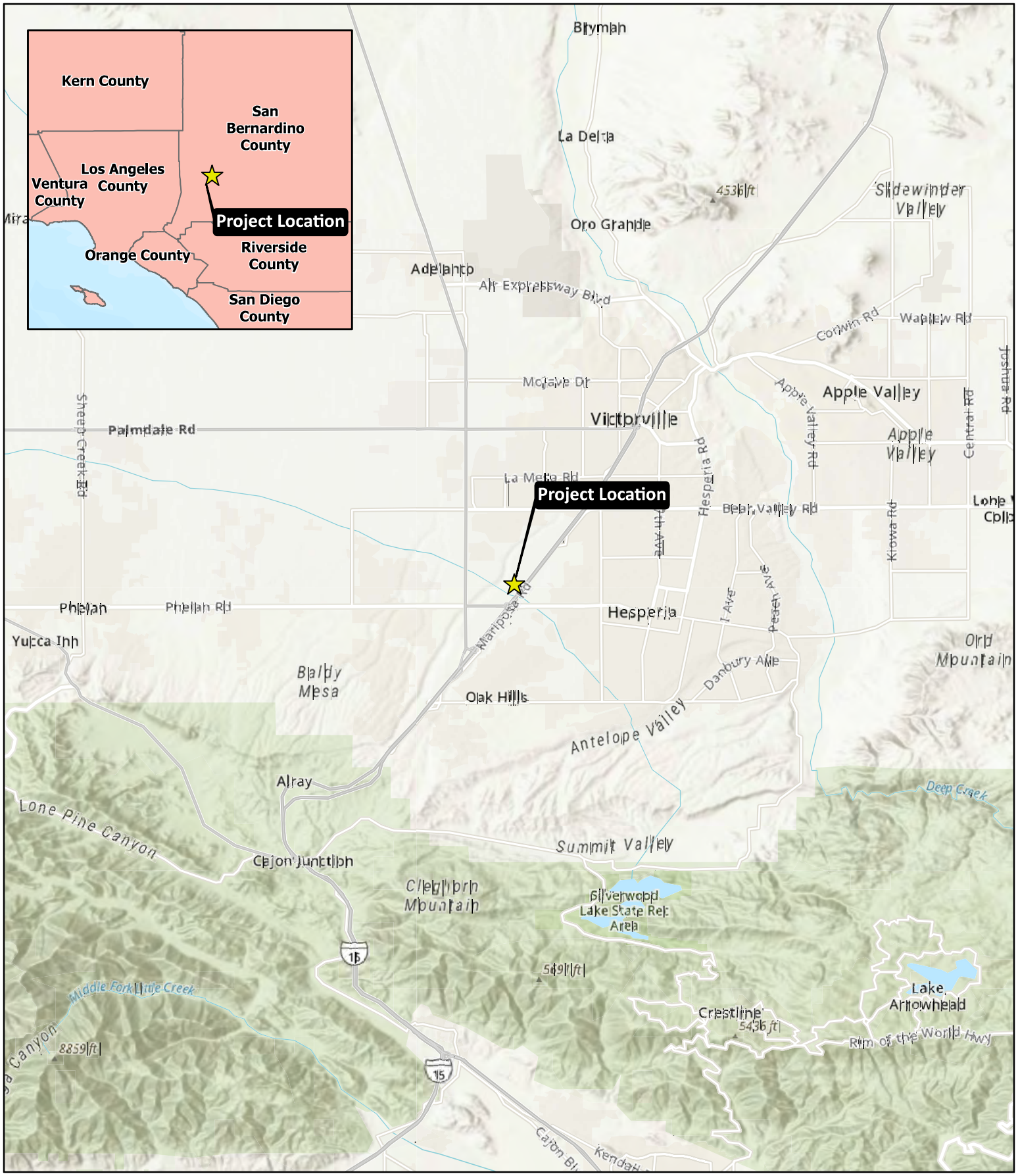


Figure 1
Regional Vicinity

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0 2 4 8
1" = 3.95 miles

APN: 0405-072-[52,53,55]

City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, NASA, NGA, USGS, Esri, USGS

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.

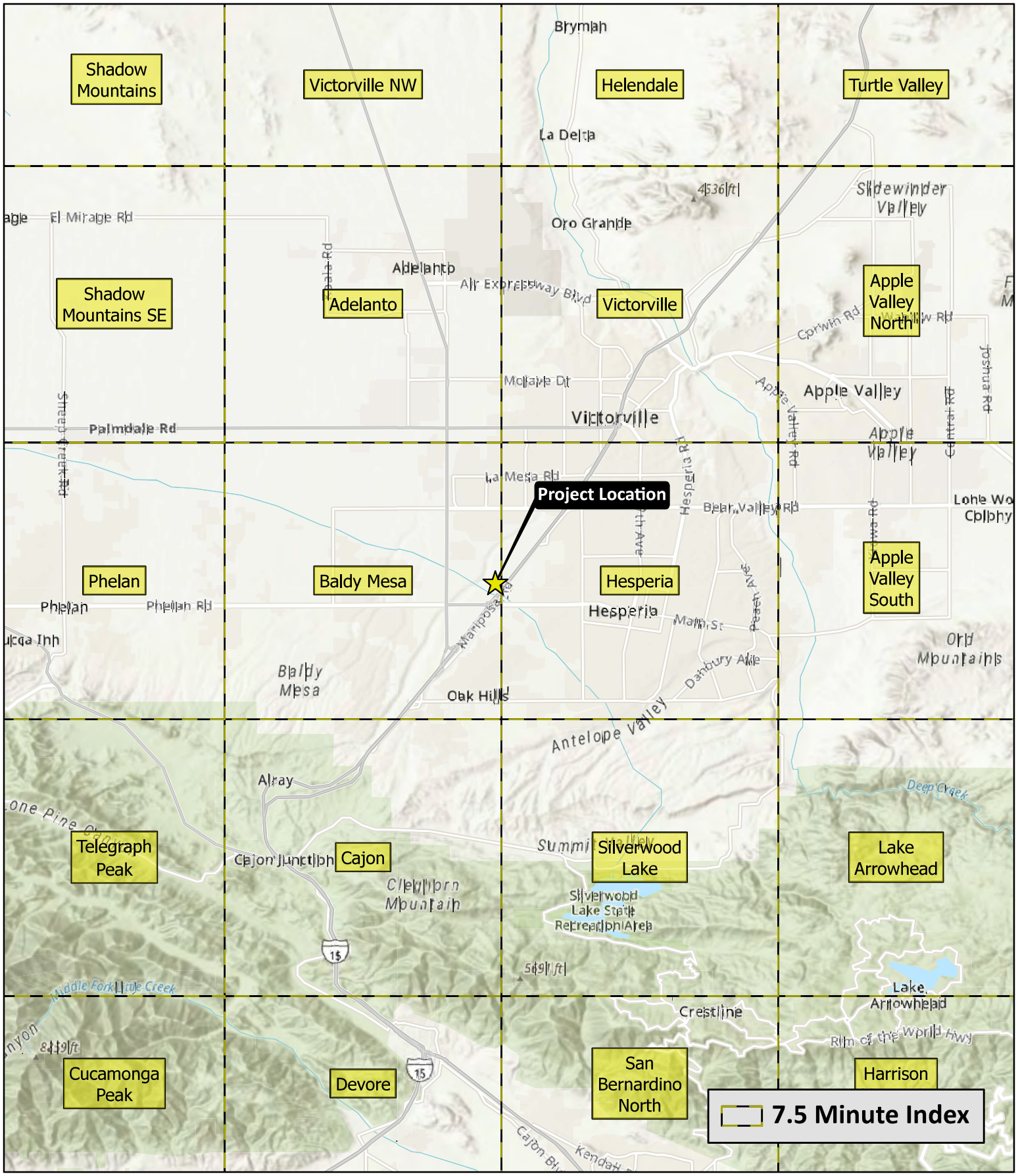


Figure 2

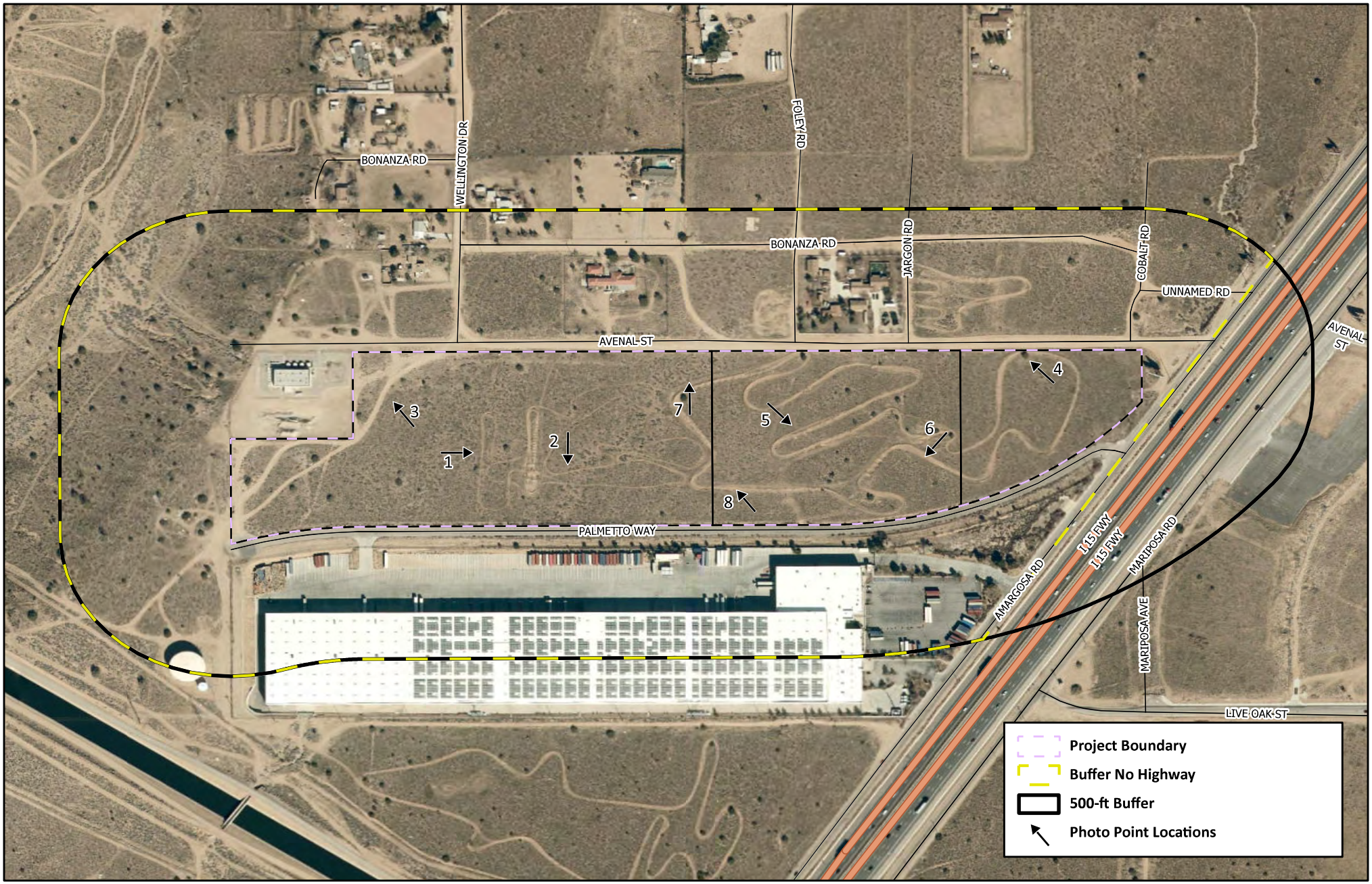
USGS

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.

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City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS



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0 250 500 1,000

1" = 460 Feet

San Bernardino County, Maxar

Figure 3
Photo Point Location Map

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way
Spec. Industrial Project

Section 2 Methodology

2.1 LITERATURE REVIEW AND DATABASE SEARCHES

Prior to conducting the field surveys, CASC conducted a thorough literature review and records search of the Survey Area encompassing a nine (9) quad search of the U.S. Geological Survey (USGS). The Survey Area is located between *Baldy Mesa* quadrangle and *Hesperia* quadrangle (north of the California Aqueduct*).* A search of the adjacent quadrangles was conducted: *Shadow Mountain SE, Adelanto, Victorville, Phelan, Telegraph Peak, Cajon, and Silverlake Lake,* California. The nine (9) quad search was used for the CDFW Biogeographic Information and Observation System (CDFW 2022a), CDFW California Natural Diversity Database (CNDDB) RareFind 5 (CDFW 2022b), and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2022). In addition, the Survey Area was used to generate a Species and Resources List from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online system (IPaC; USFWS 2022a). This helped to identify special-status plant and wildlife species, vegetation communities, and other biological resources that have been previously documented within, near, and/or that have the potential to occur within the Survey Area. The *Special Animals List* (CDFW 2022c, *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2022d), and CNPS California Rare Plant Ranking System (CRPR) were reviewed for the current status of rare and endangered plant and wildlife species. Other resources reviewed include the USFWS Critical Habitat for Threatened & Endangered Species Mapper (USFWS [ArcGIS Online] 2022); recent and historical aerial photography (Google Earth Pro 2022); the U.S. Department of Agriculture, Natural Resources Conservation Service (USDA) Web Soil Survey (USDA 2022a); and USFWS National Wetland Inventory (NWI) Mapper (USFWS 2022b).

2.2 GENERAL BIOLOGICAL RESOURCES SURVEY

Following the literature review, CASC's Biologists Kimberly Boydstun and Cory Peterson, conducted a general biological resources assessment of the entire Survey Area. The Survey Area is defined as the Project Site plus a 500-foot buffer where accessible and shown on Figure 3. Undeveloped property to the west of the Project Site was also inventoried. Properties to the east is Amargosa Road and Interstate 15, to the south is a Palmetto Way and an existing warehouse, to the north is private residences which were fenced. These areas to the north, south, and east were not inventoried. The first site assessment was performed on April 27, 2022, between the hours of 0815 and 1500, with weather conditions consisting of temperatures ranging from 47 to 75 degrees Fahrenheit (°F), winds approximately 2 to 3 miles per hour, and clear skies. The second site assessment was performed on May 2, 2022, between the hours of 1000 to 1330, with weather conditions consisting of temperatures ranging from 68 to 76°F, winds approximately 2-3 miles per hour, and clear skies. The surveys were conducted to document existing site conditions, obtain an inventory of plant and wildlife species, map vegetation communities/land uses, determine the potential for special-status plant and wildlife resources to occur within the

Survey Area, perform a Joshua tree (*Yucca brevifolia*) inventory, and to identify any jurisdictional aquatic features. Representative photographs of the Project Site are provided at the end of this Report in Appendix B, Project Site Photographs. Figure 3, Photo Point Location Map, shows the location and direction each photo was taken.

2.2.1 Vegetation/Land Use Mapping and Plant Species Inventory

Classification of the vegetation communities and other land uses within the Survey Area is based on the descriptions of terrestrial vegetation classification systems described in *A Manual of California Vegetation* (MCV Sawyer et al. 2009) and cross referenced with the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). The vegetation on site was classified as *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance. Plant species nomenclature and taxonomy follow *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al. 2012). Refer to Appendix C, Plant Compendia for a complete list of plant species observed within the Survey Area.

2.2.2 General Wildlife Observations

Field guides used to assist with identification of species during the habitat assessment included *The Sibley Guide to Birds* (Sibley 2014) for birds, *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003) for herpetofauna and *A Field Guide to Mammals of North America* (Reid 2006). Although common names of wildlife species are well standardized, scientific names are provided immediately following common names of wildlife species in this Report (first reference only). To the extent possible, nomenclature of birds follows the most recent annual supplement of the American Ornithological Union's *Checklist of North American Birds* (Chesser et al. 2020), nomenclature of amphibians and reptiles follows *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding* (Crother 2012), and nomenclature for mammals follows the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014). All wildlife species observed and/or otherwise detected through sign (e.g., tracks, scat) were recorded. Other wildlife species may occupy the Survey Area but, in some cases, may be nocturnal and not easily detectable during the day without extensive survey efforts during the appropriate season. Some species are transients or migrants and may occupy the Survey Area other times of the year outside of the time that the field survey was conducted. Refer to Appendix D, Wildlife Compendia for a complete list of wildlife species observed or otherwise detected within the Survey Area.

2.3 OTHER FIELD STUDIES

A database search of the CDFW's CNDDB was used to identify and map all known ~~(~~federally and State Threatened species) locations within one (1) to five (5) miles of the Project Site as well as a comprehensive literature review of available previous biological studies and environmental documents completed for the Project and its vicinity. CASC's Biologists also reviewed USFWS

Critical Habitat documentation to determine the Project's location in relation to Critical Habitat (Figure 4, Critical Habitat) (USFWS [ArcGIS Online] 2022). There is no critical habitat on or within close proximity to the Project Site. CASC's Biologists conducted 100-percent visual coverage of the Survey Area and performed a habitat assessment and burrow search of the Project Site specifically for Western burrowing owl and desert tortoise.

2.3.1 Special-Status Plants

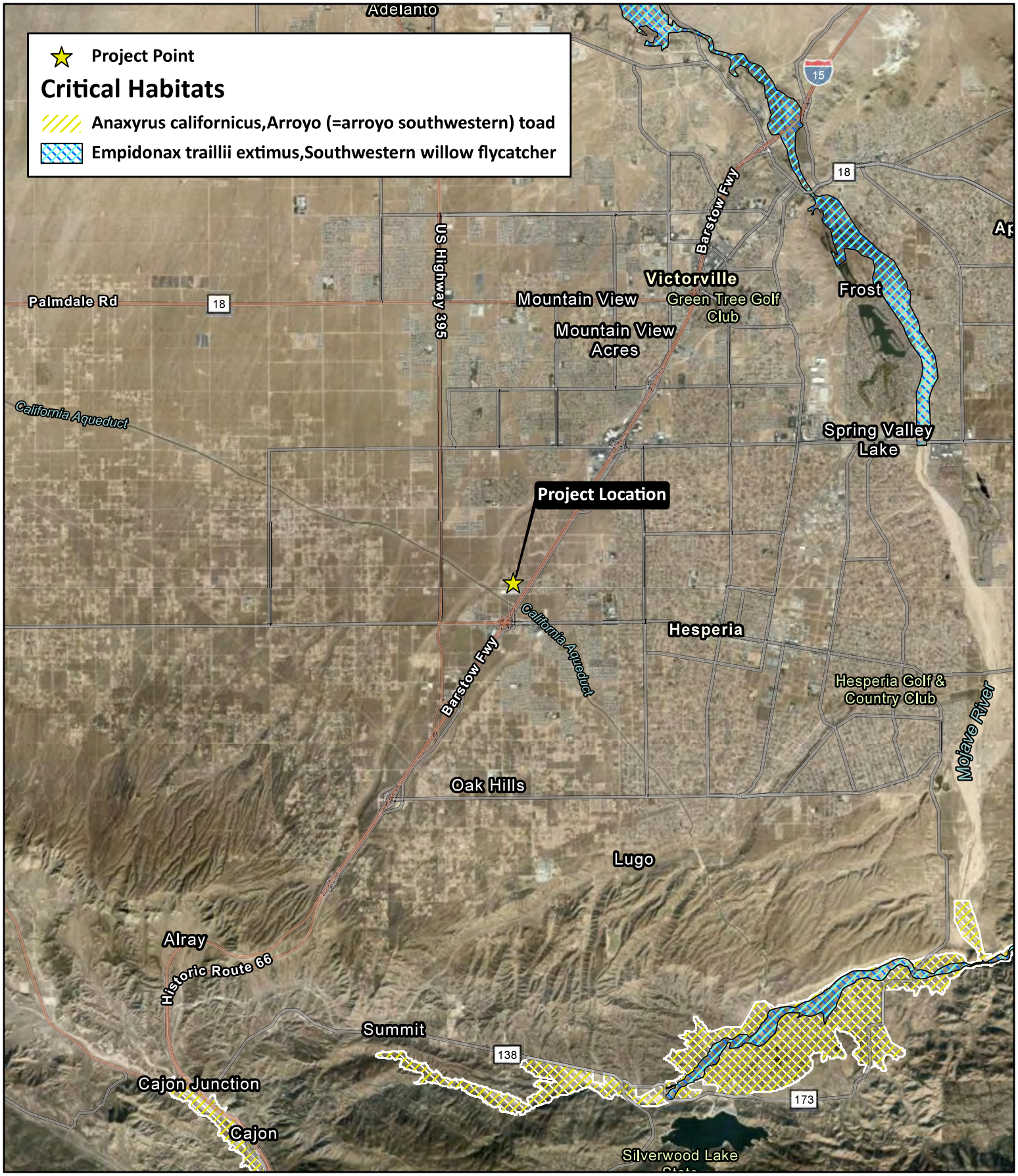
A database search of the CDFW's CNDDB and the CNPS Online Inventory of Rare and Endangered Plants was used to identify and map rare plant records from a 9-quad search within a five (5) mile radius of the Project Site. Based on the database search and literature review, it was determined that a total of nine (9) special-status plant species have the probability of occurrence in the general range of the Survey Area. Appendix E, CNDDB Summary Table from California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB) search conducted for the Project.

2.3.2 Special-Status Wildlife

A database search of the CDFW's CNDDB and RareFind/Bios Online Inventory was used to identify and map wildlife records from a 9-quad search within a five (5) mile radius of the Project Site. Based on the database search and literature review, it was determined that a total of forty-six (46) special-status wildlife species have the probability of occurrence within the general range of the Survey Area. Specific habitat requirements and a records search for each species were considered and it was determined that three (3) species had a high probability of occurrence within the local vicinity of the Project Site. Appendix E, CNDDB Summary Table search conducted for the Project.

2.3.3 Jurisdictional Features Analysis

CASC conducted a thorough literature review of relevant resources to obtain an initial understanding of the environmental setting and to preliminarily identify features that could be regulated by the jurisdictional agencies. CASC reviewed the USFWS NWI Mapper (USFWS 2022b). Appendix F shows the results of the NWI Mapper search. There are no jurisdictional features on the Project Site.



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0 1 2 4
1" = 2.17 miles

Figure 4
Critical Habitat

APN: 0405-072-[52,53,55]

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.

San Bernardino County, Earthstar Geographics, City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

Section 3 Existing Conditions

The following is a summarization of the results of the database review and general biological resources survey performed by CASC. Discussions regarding the general environmental setting, vegetation communities and other land uses present, and plant and wildlife species observed are presented below. Representative photographs of the Project Site are provided in Appendix B, and a complete list of all the plant and wildlife species observed within the Survey Area during the field survey is provided in Appendix C and D, respectively.

3.1 ENVIRONMENTAL SETTING

The Project Site consists of 30.52-undeveloped acres and is located north of Palmetto Way, south of unimproved Avenal Street, and east of Amargosa Road in Hesperia, California. Access to the entire site was unobstructed and the biologists were able to perform a one hundred percent visualization of the Project Site. A large industrial building resides south of the Project Site, to the north along Avenal Street are homes with fenced yards, to the east is Amargosa Road and I-15, and to the west is a fenced utilities yard and open space.

3.1.1 Climate

The Survey Area, located in the high desert, has an arid climate characterized by cool winters and hot summers. With an average annual high temperature typically of approximately 79°F, highs in the summer average approximately 100°F and lows in the winter averaging approximately 4 °F, and low humidity throughout the year. Average annual precipitation for the Hesperia, California, area is approximately 5.06 inches (U.S. Climate Data 2021).

3.2 TOPOGRAPHY AND SOILS

The Survey Area is in a region of San Bernardino County known as the “High Desert” due to its approximate elevation of 3,600 feet above mean sea level (amsl). Much of the Survey Area is relatively flat, with surface elevations varying between approximately 3,468 feet amsl in the southwestern corner to approximately 3,443 feet amsl in the northeastern corner.

Soils within the Survey Area and in adjoining areas were reviewed prior to the field survey using the Web Soil Survey (USDA 2021a) (Figure 5, USDA Soils Map). Mapped soils within the Survey Area include the following:

- Cajon Sand, 0 to 2 Percent Slopes
- Cajon Sand, 2 to 9 Percent Slopes
- Cajon Sand, 9 to 15 Percent Slopes
- Hesperia Loamy Fine Sand, 2 to 5 Percent Slopes

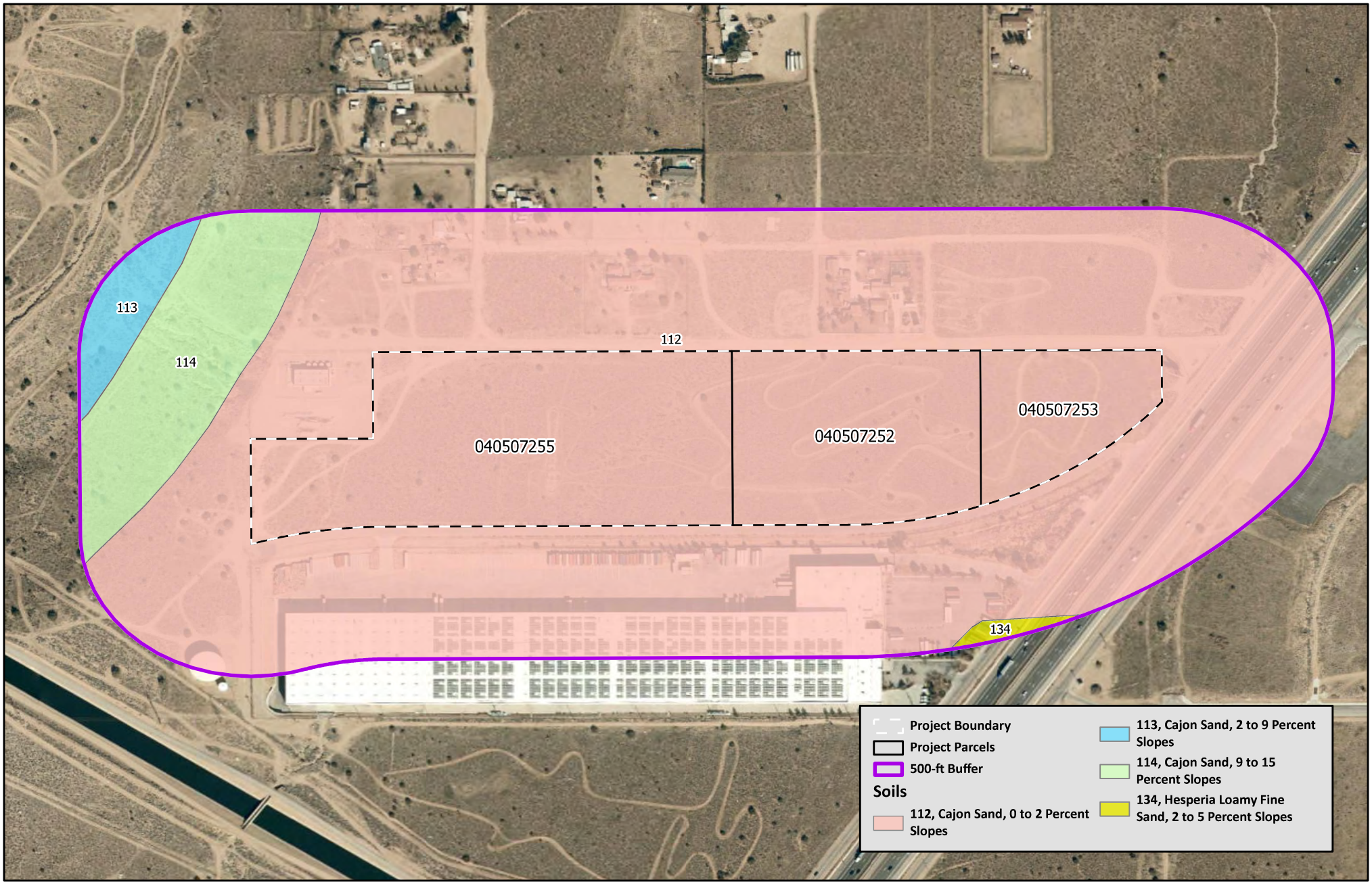
3.3 VEGETATION COMMUNITIES AND OTHER LAND USES

The Project Site is undeveloped and has been disturbed by grading which appears to have been from some time ago as the vegetation is growing back but is of small stature. Impacts will encompass the entire 30.52-acres of the Project Site. The vegetation community within the Survey Area was identified as *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance with dominant species being white bursage (*Ambrosia dumosa*), creosote bush (*Larrea tridentata*) and Mexican tea *(Ephedra trifurca).* Joshua tree (*Yucca brevifolia*) (CDFW Candidate Listed species) is present on the Project Site. A complete list of all species recorded within the Survey Area can be found in Appendices C and D.

CASC's biologists recorded a total of fifty-two (52) live Western Joshua tree within the Project boundary. Seven (7) dead Joshua trees were recorded as it is required by CDFW to record the location of dead trees. Western Joshua tree were also recorded within the Project buffer. GPS was used to record the location of all dead and viable Western Joshua trees on the Project Site (Figure 6, Joshua Tree and Potential Burrow Locations). The Project Site was visited multiple times to perform focused plant and wildlife surveys. During each visit the biologists completed a compendia of plants and wildlife observed. Appendix C and D lists all species observed during the field surveys. Field surveys occurred from April through July of 2022.

3.4 GENERAL WILDLIFE OBSERVATIONS

The Survey Area is dominated by disturbed native vegetation, ruderal species, and friable soils. Wildlife diversity during the field survey was generally low, likely due to the low diversity of the plant assemblage. The commonly observed species within the Survey Area was mourning dove (*Zenaida macroura*) and common raven (*Corvus corax*). Refer to Appendix C for a complete list of wildlife species observed during the field surveys.



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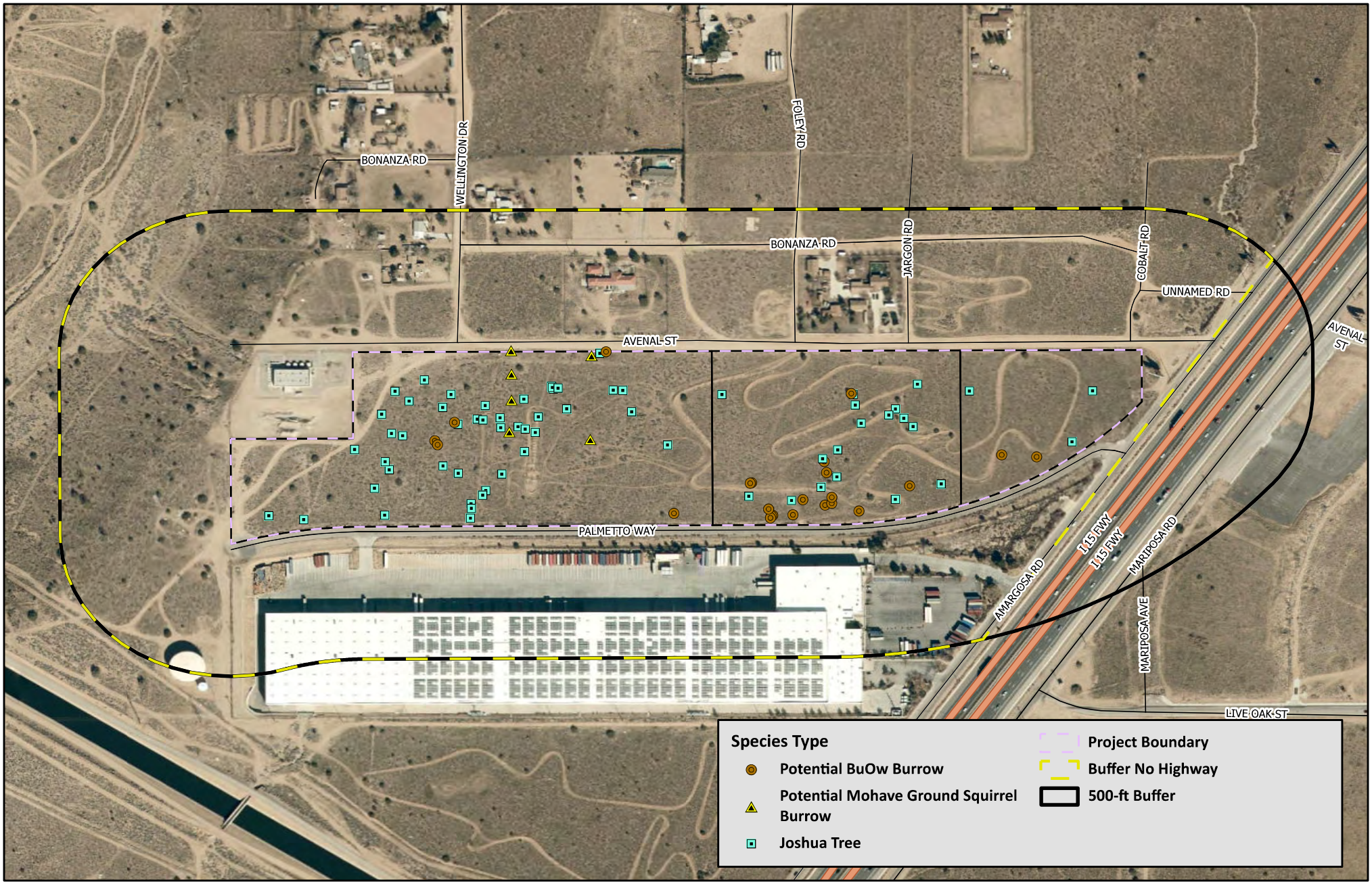
1" = 460 Feet

San Bernardino County, Maxar

Figure 5
Soils

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.



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0 200 400 800

1" = 460 Feet

Figure 6

Joshua Tree and Potential Burrow Locations

APN: 0405-072-[52,53,55]

San Bernardino County, Maxar

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.

3.5 REGULATORY SETTING

3.5.1 Federal Regulations

Federal Endangered Species Act (FESA) of 1973

As defined within the FESA of 1973, an endangered species is any animal or plant listed by regulation as being in danger of extinction throughout all, or a significant portion, of its geographical range. A threatened species is any animal or plant that is likely to become endangered within the foreseeable future throughout all or a significant portion of its geographical range. Without a special permit, federal law prohibits the "take" of any individuals or habitat of federally-listed species. Under Section 9 of the FESA, "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" has been clarified to include "any act which actually kills or injures fish or wildlife and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife." Enforcement of FESA is administered by the USFWS.

Under the definition used by the FESA, "Critical Habitat" refers to specific areas within the geographical range of a species that were occupied at the time it was listed that contain the physical or biological features that are essential to the survival and eventual recovery of that species and that may require special management considerations or protection, regardless of whether the species is still extant in the area.

Migratory Bird Treaty Act (MBTA)

Pursuant to the MBTA (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The statute states:

"Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill...any migratory bird, any part, nest, or egg of any such bird...included in the terms of the [Migratory Bird] conventions…"

The Act covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered a "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six (6) families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons

and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

Executive Order 13112 – Invasive Species

On February 3, 1999, President William J. Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm, or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the State's invasive species list, maintained by the California Invasive Species Council to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project. Under the Executive Order, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

3.5.2 State Regulations

California Environmental Quality Act (CEQA)

CEQA provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" species as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the State of California has its own CESA, enforced by the CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

California Fish and Game Code (CFGC)

Sections 3503, 3503.5, 3511, and 3513

The CDFW administers the CFGC. There are particular sections of the CFGC that are applicable to natural resource management. For example, Section 3503 makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey), such as hawks, eagles, and owls, are protected under Section 3503.5 which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). In addition, Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Section 4150

Section 4150 of the CFGC protects nongame mammals, defined as any naturally-occurring mammal in California that is not a game mammal, fully protected mammal, or fur-bearing mammal. Nongame mammals, which includes bats and bat roosts, may not be taken or possessed except as provided by the CFGC or in accordance with applicable regulations.

Section 749.11, Title 14, California Code of Regulations

The proposed addition of Section 749.11, Title 14, California Code of Regulations creates a special order allowing incidental take of western Joshua tree during CESA candidacy necessary to address this emergency.

On September 22, 2020, the Commission determined that listing may be warranted pursuant to FGC Section 2074.2. Western Joshua tree became a candidate species under CESA, effective upon publication of the notice of findings on October 9, 2020 (Office of Administrative Law notice number Z2020- 0924-01). Pursuant to FGC Section 2074.6, the Department will undertake a one-year status review. After the Commission receives the Department's status review, the

Commission will make a final decision on listing. As of October 12, 2022, the final decision by the Commission has been postponed until February 2023.

Statutory Authority

Candidate species are protected from take under CESA pursuant to FGC Section 2085 during the remainder of the CESA listing. Under FGC Section 2084, CESA provides that the Commission may adopt regulations to authorize take of candidate species, based on the best available scientific information, when the take is otherwise consistent with CESA. As with all regulations, the Commission may adopt a regulation under Section 2084 on an emergency basis when it determines that a situation exists which threatens public health and safety or general welfare.

Another means to allow take of CESA candidate species is by Incidental Take Permit (ITP) pursuant to FGC Section 2081, subdivision (b), from the Department. An ITP allows a permittee to take CESA listed or candidate species if such taking is incidental to, and for the purpose of, carrying out an otherwise lawful activity, including for research or monitoring activities of such activity.

Native Plant Protection Act

Sections 1900–1913 of the CFGC were developed to preserve, protect, and enhance Rare and Endangered plants in the State of California. The act requires all State agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Desert Native Plants Act (CDNPA)

Division 23 of the California Food and Agriculture Code consists of the CDNPA. The CDNPA was developed to protect certain species of California desert native plants from unlawful harvesting on both public and privately-owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee.

3.5.3 Local Policies and Ordinances

San Bernardino County Countywide Plan

The Conservation Element of the County of San Bernardino General Plan identifies measures to preserve the unique environmental features and natural resources of the desert region, including native wildlife and vegetation. One role of the Conservation Element involves the identification of a community's natural resources and the adoption of policies for their preservation, development, and wise use.

Section 4 Results

The following discusses the potential for special-status plant and wildlife species and special-status vegetation communities to occur within the Survey Area. The CNDDB and CNPS Online Inventory were queried for reported locations of special-status plant and wildlife species as well as special-status natural vegetation communities within the 9-quad search radius. All CNDDB occurrences, documentation of special-status species and vegetation communities, and USFWS-designated Critical Habitat within a five (5) mile radius of the Project Site are shown in Figure 4. An evaluation of the potential for each species identified in the database records search to occur within the Survey Area is presented in the following section.

4.1 SPECIAL-STATUS SPECIES

The field survey was conducted to assess the conditions of the habitat(s) within the boundaries of the Survey Area to determine if the existing vegetation communities, at the time of the field survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species. Additionally, the potential for special-status species to occur within the Survey Area was determined based on the reported locations in the CNDDB and CNPS Online Inventory and the following:

- **Present**: the species was observed or detected within the Survey Area during the field survey.
- **High**: Recent occurrence records indicate that the species has been known to occur on or within one (1) mile of the Survey Area and the Survey Area is within the normal or expected range of this species. Intact, suitable habitat preferred by this species occurs within the Survey Area and/or there is viable landscape connectivity to a local known extant population(s) or sighting(s).
- **Moderate**: Recent occurrence records indicate that the species has been known to occur within one (1) mile of the Survey Area and the Survey Area is within the normal expected range of this species. There is suitable habitat within the Survey Area but the site is ecologically isolated from any local known extant populations or sightings.
- **Low**: Recent occurrence records indicate that the species has been known to occur within 5 miles of the Survey Area, but the Survey Area is outside of the normal expected range of the species and/or there is poor quality or marginal habitat within the Survey Area.
- **Not Expected**: There are no occurrence records of the species occurring within 5 miles of the Survey Area, there is no suitable habitat within the Survey Area, and/or the Survey Area is outside of the normal expected range for the species.
- **Absent**: The species has been determined to conclusively be absent from the Survey Area.

The literature search identified many species having the probability of occurrence on the Project Site. Special-status plant and wildlife species were evaluated for their potential to occur within the Survey Area based on habitat requirements, availability and quality of suitable habitat, and known distributions. After these considerations, the biologists identified nine (9) special-status plant species and three (3) special-status wildlife species as having the highest probability of occurrence. A complete table of special-status species queried for this report can be found in Appendix E, as well as definitions for ranking of each category (Appendix E, page 10).

4.1.1 Special-Status Plant Species

Nine (9) special-status plant species were identified from literature search and local knowledge and familiarity as having potential to occur within the region of the Survey Area. Focused surveys were conducted on April 6, May 26, and July 7, 2022 by senior biologist Philippe Vergne of Envira. Based on the results of focused surveys and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that the Project Site has a **low** probability to support these species. Additionally, these species were **absent** during the focused surveys**.** Focused surveys for the following species were performed: ayenia (*Ayenia compacta*) (CRPR 2B.3), Lincoln rockcress (*Boechera lincolnensis*) (CRPR 2B.3), Latimer's woodland-gilia (*Saltugilia latimeri*) (CRPR 1B.2), alkali mariposa-lily (*Calchortus striatus*) (CRPR 1B.2),pygmy poppy (*Canbya candida*) (CRPR 4.2), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) (CRPR 1B.2), Booth's evening primrose (*Eremothera boothii* ssp. *boothii*) (CRPR 2B.3), short-joint beavertail (*Opuntia basilaris* var. brachyclada) (CRPR 1B.2), and Parish's brittlescale (*Atriplex parishii*) (CRPR 1B.1). None of these special-status species were observed during the field surveys performed nor are they expected to occur at the Project Site. The focused plant survey report completed by Envira can be reviewed in Appendix G. It details the dates, weather conditions and habitat associations considered for each plant species.

CRPR: California Rare Plant Rank

1B.1	Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2	Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California
2B.3	Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
4.2	Plants of limited distribution; fairly threatened in California

Western Joshua Tree Inventory

CASC's biologist performed an inventory of Western Joshua trees (*Yucca brevifolia*, State Listed as Candidate Threatened) and locally sensitive cactus within the Survey Area (Project Site and the 500-foot buffer). Fifty-two (52) live Joshua trees were recorded during the April 27, 2022 site visit. Additionally, seven (7) dead Joshua trees were recorded on the Project Site. Data on Western Joshua tree within the buffer was recorded as required by CDFW but are not presented in Table 1 Western Joshua Tree Inventory. Per CDFW reporting requirements, the Western Joshua trees in Table 1 was photographed, a general health assessment performed (height, branching, clonal, etc.), and GPS location of each tree was noted (Table 1, Western Joshua Tree Inventory). *Sololocator* was used to correspond the photographs and GPS locations of the Joshua trees on the Project Site and within the buffer.

Highlighted in blue in Table 1 are those Western Joshua trees deemed appropriate for relocation according to the CDFW criteria (see below, Section 4.1.2 Criteria for Relocation). Highlighted in yellow are the largest and healthiest trees on site. Avoidance or relocation of Western Joshua trees will reduce the mitigation obligation with avoidance being the preferred strategy followed by on-site relocation of Western Joshua trees. Thirty-one (31) of the Western Joshua trees meet the criteria for relocation, the very best specimens can be selected to improve the chances of survival and overall success. If Western Joshua tree can be incorporated into the Project Site landscape or avoided this would help to reduce the mitigation obligation. Avoidance and relocation are highly valued by the California Department of Fish and Wildlife. Table 1 shows the GPS location of all Western Joshua tree on-site, their approximate height and a general health assessment.

Table 1. Western Joshua Tree Inventory

Tree Number	Approx Height inches/foot	Health/Notes	Location/GPS Coordinate	Panicle* (Bloom)
1	4-foot	Good, 2-trunks, clonal	117°38'15"W 34°43'60"N	No
2	4-foot	Good, 1-trunk	117°38'14"W 34°43'59"N	No
3	5-foot	Good; 1-trunk	117°38'11"W 34°43'58"N	No
4	5½-foot	Good; 1-trunk	117°38'03"W 34°43'59"N	No
5	1-foot	Poor, 1-trunk, laying over, yellow	117°38'03"W 34°43'63"N	No
6	3½ -foot	Good; 1-trunk	117°38'03"W 34°43'64"N	No
7	1-foot	Good; 1-trunk	117°38'06"W 34°43'65"N	No
8	Flat on ground	Poor, 1-trunk, yellow	117°38'04"W 34°43'61"N	No
9	2-foot	Poor, 1-trunk, on ground, yellow	117°38'02"W 34°43'67"N	No
10	3½ -foot	Good; 1-trunk	117°38'01"W 34°43'67"N	No
11	5-foot	Good, 1-trunk	117°38'03"W 34°43'69"N	No

12	5-foot and 4½ foot	Good, 2-trunks, clonal	117°38'02"W 34°43'71"N	No
13	4-foot	Good, 1-trunk	117°38'01"W 34°43'70"N	No
14	20-foot	Good, single trunk	117°37'99"W 34°43'72"N	Yes
15	3½-foot 1-foot	Good, 2-trunks; clonal	117°37'97"W 34°43'71"N	No
16	3½-foot 1-foot	Good, 2-trunks, clonal	117°37'98"W 34°43'69"N	No
17	4-foot	Good, 1-trunk	117°37'96"W 34°43'68"N	No
18	3½-foot	Good; 1-trunk	117°37'98"W 34°43'64"N	No
19	5-foot	Good, 1-trunk	117°37'98"W 34°43'63"N	No
20	2-foot 4½-foot	Good, 2-trunks, clonal	117°37'95"W 34°43'60"N	No
21	4½-foot	Good, 1-trunk	117°37'95"W 34°43'59"N	No
22	3-foot	Good, 1-trunk	117°37'95"W 34°43'59"N	No
23	3-foot	Good, 1-trunk	117°37'93"W 34°43'61"N	No
24	6-foot	Good, 1-trunk	117°37'94"W 34°43'61"N	No
25	4-foot	Good, 1-trunk	117°37'92"W 34°43'63"N	No
26	6½-foot	Good, 1-trunk	117°37'94"W 34°43'68"N	No
27	4-foot	Good, 1-trunk	117°37'94"W 34°43'68"N	No
28	3½-foot	Good, 1-trunk	117°37'93"W 34°43'69"N	No
29	2-foot	Good, 1-trunk	117°24'8"W 34°24'48"N	No
30	2-foot	Good, 1-trunk	117°37'92"W 34°43'67"N	No
31	2-foot	Good, 1-trunk	117°37'90"W 34°43'67"N	No
32	3-foot	Good; 1-trunk	117°37'90"W 34°43'65"N	No
33	3½-foot	Good, 1-trunk	117°37'87"W 34°43'71"N	No
34	3½-foot	Good, 1-trunk	117°37'87"W 34°43'71"N	No
35	25-foot	Good, 1-trunk	117°37'82"W 34°43'74"N	Yes
36	2-foot	Good, 1-trunk	117°37'81"W 34°43'71"N	No
37	3-foot	Good, 1-trunk	117°37'80"W 34°43'71"N	No
38	Dead, 15-foot	Dead, laying on ground	117°24'6"W 34°24'49"N	No
39	Dead, 8-foot	Dead, laying on ground	117°37'76"W 34°43'66"N	No
40	Dead, 6-foot	Dead, laying on ground	117°37'70"W 34°43'71"N	No
41	Dead, 10-foot	Dead, laying on ground	117°37'68"W 34°43'61"N	No
42	Dead	Dead	117°37'64"W 34°43'60"N	No
43	15-foot	Good, 1-trunk	117°37'61"W 34°43'62"N	Yes
44	18-foot	Good, 1-trunk	117°37'59"W 34°43'63"N	Yes
45	Dead	Dead	117°37'61"W 34°43'64"N	No
46	12-foot	Good, 1-trunk	117°37'59"W 34°43'65"N	No
47	20-foot	Poor, 1-trunk, dying	117°37'57"W 34°43'68"N	Yes
48	7-foot	Good, 1-trunk	117°37'58"W 34°43'69"N	No
49	1-foot	Good, 1-trunk	117°37'58"W 34°43'70"N	No
50	18-foot	Good, 1-trunk	117°37'54"W 34°43'69"N	Yes

51	8-foot	Good, 1-trunk	117°37'54"W 34°43'69"N	No
52	20-foot	Good, 1-trunk	117°37'52"W 34°43'67"N	Yes
53	4-foot	Good, 1-trunk, leaning	117°37'53"W 34°43'68"N	No
54	4-foot	Poor, 1-trunk, broken crown, yellow	117°37'51"W 34°43'72"N	No
55	4-foot	Good, 1-trunk	117°24'60"W 34°24'46"N	No
56	Dead	Dead	117°37'37"W 34°43'66"N	No
57	1, 2, and 3-foot	Good, 3-trunks, clonal	117°37'35"W 34°43'71"N	No
58	18-foot	Moderate, 1-trunk	117°37'49"W 34°43'62"N	No
59	15-foot	Moderate, 1-trunk, crown broken	117°37'54"W 34°43'60"N	Yes

Blue Highlight: Suitable for relocation according to CDFW parameters.

Yellow Highlight: Largest trees, if possible, preserve in place to reduce mitigation obligation.

****Panicle:*** A panicle (bloom/cluster of flowers) is a compound inflorescence , formed by a cluster of racemes on a single axis.

Criteria for Relocation

Each Western Joshua tree was evaluated for suitability of potential relocation and transplanting based on the following criteria which is provided on research completed by California Department of Fish and Wildlife:

- Trees from approximately 2-foot in height to approximately 12-foot.
- No visible sign of damage to the tree such as absence of bark due to rodents, vandalism, etc.
- Tree has minimal number of branches (between 2-3 branches).
- Tree is not excessively leaning.
- Tree does not have yellow or brown fronds.
- Proximity to other Western Joshua trees (i.e., clonal).
- Tree does not have exposed roots at the base.
- Presence of branches with panicles.

4.1.2 Special-Status Wildlife Species

Focused surveys were performed for the three special-status wildlife species that were determined to have the highest probability of occurrence at the Project Site. The results of each of these focused surveys is presented below. The full reports for each species can be found in Appendix G.

Western Burrowing Owl

The Survey Area is within the historic range of Western burrowing owl((*Athene cunicularia,* SSC) and has **high** potential to support this species. During the habitat assessment it was determined that focused surveys should be performed. Western burrowing owl is a locally significant species within San Bernardino County. During the habitat assessment several burrows were noted of appropriate size to support this species at the Project Site. CASC's biologist performed a habitat assessment on April 27 and May 2, 2022 and noted several burrows of appropriate size to support burrowing owl (Figure 6). The biologist walked transects and were able to visually assess 100% of the Project Site. Focused surveys were performed on June 2 and 27, July 20, and August 10, 2022. No scat, pellets, or other sign was observed within the Survey Area during any of the surveys. Refer to Appendix G for the full focused survey report for BuOw.

Mohave Ground Squirrel

The Survey Area is within the historic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*, State Threatened). Its historical range encompasses an area between Antelope Valley and Lucerne Valley, in the south (Gustafson 1993). However, Mohave ground squirrel occurrences in the southern portion of its range are very unusual. The northern limits of the range are near Owens Dry Lake-bed, in the north, and through China Lake Naval Weapons Station and Fort Irwin Military Base in the east (Gustafson 1993). The eastern limit of the species range extends to Barstow and south along the Mojave River. The western limits loosely follow State Highway 14 and the foothills of the southern Sierra Nevada escarpment (Gustafson 1993). Several other common squirrels occur within their range; antelope ground squirrel (*Ammospermophilus leucurus),* round-tailed ground squirrel (*Xerospermophilus tereticaudus*) and the California ground squirrel (*Spermophilus beecheyi*).

Habitat conditions on the Project Site are suitable for Mohave ground squirrel and it was determined during the habitat assessment that this species has **moderate** potential of occurrence. Focused surveys were conducted for this species with a total of three trapping sessions which occurred during April 5-9, May 23-27, and June 14-18, 2022. Mohave ground squirrel was not captured during the protocol level sessions and is not expected to occur at the Project Site. Mohave ground squirrel were not captured in the Project Site or within any census grids during any of the three live trapping sessions. This species is considered **absent** from the Project Site. Only the antelope ground squirrel and California ground squirrel were trapped within the grid. Refer to Appendix G, focused survey report prepared by Phillipe Vergne, Senior Biologist, Envira for the full focused survey report and additional details for this species. Mr. Vergne has a Memorandum of Understanding with CDFW to trap Mohave ground squirrel (SC-002835) and is included in Appendix G.

Desert Tortoise

The desert tortoise (*Gopherus agassizii,* Federal Threatened/State Threatened) is a desert dwelling reptile that occurs throughout the Mojave and Sonoran deserts. It is found in California, Nevada and Utah, occurring in almost every type of habitat except dry lakes or playas, sand dunes and sand sheets and rocky slopes. Habitat is marginal at the Project Site for this species and it was determined that the Survey Area has **low** potential to support desert tortoise. While suitable habitat is present in the Survey Area, it is outside of the current known range for this species. Further, desert tortoise has not been recorded near the Project Site for many years. The local desert tortoise population has undergone severe declines over time. Focused surveys were performed on April 8-9, 2022 by Philippe Vergne, Senior Biologist, Envira. Desert tortoise surveys were conducted according to USFWS protocol by covering the entire project site by walking east to west transects ten meters apart, and the zone of influence. The zone of influence (ZOI) includes parallel transects of 100, 300, 600, 1,200 and 2,400-feet for tortoises. The zone of influence was completed until being bisected by the Canal, fencing, development and private property boundaries. During the focused surveys no sign (scat, burrows, etc.) of this species was noted and this species is not expected to occur at the Project Site. This species is considered **absent** from the Project Site Refer to Appendix G, focused survey report prepared by Phillipe Vergne, Senior Biologist, Envira for the full focused survey report and additional details for this species.

4.2 NESTING BIRDS AND WILDIFE MOVEMENT

Shrubs and Western Joshua tree located within the Survey Area provide nesting habitat for a number of nesting bird species. Several nests of cactus wren (*Campylorhynchus brumeicapillus)* were found during the site survey. Other avian species with potential to nest on the Project Site included mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and house finch (*Carpodacus mexicanus*). Turkey vulture (*Cathartes aura*) was also noted during the survey and can utilize the site for foraging and thermoregulation. Black-tailed jackrabbit (*Lepus californicus*) is expected to nest and forage on site. And coyote (*Canis latrans*) was observed foraging as evidenced by the presence of sign (scat and tracks). The site is undeveloped as are the adjacent properties. It is possible that wildlife moves readily throughout the site to access adjacent habitat.

4.3 SPECIAL-STATUS VEGETATION COMMUNITIES

The vegetation community within the Survey Area was identified as *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance with scattered western Joshua trees. Species identified within this community include smoke trees (*Cotinus* sp.), species in the Agavacea family, mesquite (*Prosopis* sp.), large creosote bushes (*Larrea* sp.), Western Joshua trees, and any other plants are protected by the *State Desert Native Plant Act*. As such, any impacts to these sensitive natural

communities may be considered significant under CEQA and require further mitigation to ensure compliance with the federal, State, and local regulations. These mitigation requirements are typically determined during the CEQA review and approval process. Mitigation to address any potential impacts is discussed below in Section 5.1 Special Status Plant Species/Vegetation Communities.

4.4 REGIONAL CONNECTIVITY

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. The County identifies Wildlife Corridors and Areas of Critical Environmental Concern in their open space element of the General Plan. Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. A wildlife corridor is generally represented by a linear patch of habitat that provides a connection between two core areas of the same habitat, allowing for the large-scale movement of species within their native habitats. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provides corridors for wildlife travel. Wildlife movement corridors are important because they provide access for breeding opportunities, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations.

The Project Site is not identified within the San Bernardino County General Plan as a Wildlife Corridor or Linkage, San Bernardino County Corridor Locations. The County identifies Wildlife Corridors and Areas of Critical Environmental Concern in their open space element of the General Plan. Further, the Project Site is bound on the east by Amargosa Road and I-15, to the south by Palmetto Way and an industrial complex, to the north by Avenal Street and fenced residential housing, leaving only the western project boundary open for wildlife to access the site. Thus, not providing adequate access or cover to provide significant wildlife movement through the site.

4.5 CRITICAL HABITAT

USFWS-designated critical habitats (proposed or final) have not been mapped within the Survey Area. The closest critical habitat is northeast and southeast of Project Site Palms (Figure 4). There is no critical habitat within the near vicinity of the Project Site, therefore, no critical habitat will be impacted by Project development.

4.6 JURISDICTIONAL FEATURES ANALYSIS

Given that the Project Site is located in the arid to semi-arid desert region, the Survey Area was assessed more specifically for ephemeral features (watercourses that flow only during and shortly after precipitation events). There are no blueline drainages or other jurisdictional features were noted on the Project Site. The National Wetlands Inventory Mapper did not identify any non-

wetlands, wetlands, or other jurisdictional features within the Survey Area. Oro Grande Wash is to the west of the Project Site and the California Aqueduct is to the south. Both of these features are well outside of the 500-foot buffer area. Further, CASC biologists did not note any such features on the Project Site or within the buffer area (Appendix F).

Section 5 Conclusion and Recommendations

CEQA requires Project proponents to analyze and disclose potential environmental impacts associated with Project development. Any potentially significant impact must be mitigated to the extent feasible. CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a project that the agency will carry out, fund, or approve. Any potentially significant impact must be mitigated to the extent feasible. Impacts to special-status species designated as endangered, threatened, rare, or a candidate species would require disclosure under CEQA. Impacts to SSC species are not considered significant under CEQA and warrant no legal protection but may simply require CEQA disclosure.

The following is conclusions and recommendations are intended to provide best management practices for Project development, provide guidance for local, State, and federal guidelines and protect natural resources.

5.1 SPECIAL STATUS PLANT AND VEGETATION COMMUNITIES

Based on the results of the focused surveys and a review of specific habitat preferences, occurrence records, known distributions, focsued survey results, and elevation ranges, it was determined that the Project Site is very unlikely to support any special-status plant species other than Western Joshua Tree.

The Western Joshua tree is a candidate species in the initial stages of consideration for listing as threatened under the California Endangered Species Act (CESA) [Office of Administrative Law's Notice ID #Z2019-1112-01 and Z2020-0924-01 Petition to list Western Joshua Tree (*Yucca brevifolia*) as a Threatened Species]. CDFW regulates all “take” of listed or candidate species. In preparation for Project development, an Incidental Take Permit (ITP) application will need to be completed with supporting documentation and an application fee paid to CDFW.

5.1.1 Avoidance and Minimization Measures

The following avoidance and minimization measure is recommended to reduce potential impacts and lessen mitigation obligation for special-status Western Joshua tree woodland to a less than significant level. Mitigation can consist of avoidance, removal, on-site relocation, off-site relocation, and purchase of credits in a CDFW approved mitigation bank. In the instance of relocation of Western Joshua tree, the Project proponent will be responsible for preparation of long-term maintenance, monitoring, watering, and weeding plan to ensure the health of the transplanted tree, the placement of fencing and signage around transplanted trees, and if requested by CDFW, an endowment to maintain the relocated trees. Purchase of credits in a CDFW approved mitigation bank can be an option once bank approval is finalized.

San Bernardino County Countywide Plan Policy NR-5.6 Mitigation Banking supports the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. The County does require public and private conservation lands or mitigation banks to ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.

BIO-1: Incidental Take Permit from CDFW

An Incidental Take Permit (ITP) application and supporting documentation shall be submitted to CDFW for review and approval for removal of Western Joshua trees on the Project Site. An ITP establishes a performance standard requiring that the impacts be "minimized and fully mitigated" with "measures that are roughly proportional in extent to the impact of the authorized taking on the species." [2] Therefore, additional mitigation measures, such as the purchase of credits from an approved conservation or mitigation bank, land acquisition, or entry into a conservation easement, will be determined in consultation with CDFW to meet ITP requirements. Because the Western Joshua tree was designated as a candidate species in October 2020 and is still subject to a status review by CDFW, it is impractical to determine the specific details of mitigation, beyond compliance with the ITP.

A completed application requires a completed CEQA document to accompany the ITP application and fee. CDFW requires the CEQA document have a state clearing house number, show proof of filing fees, and that the document has been circulated. CDFW will then review the ITP and CEQA document and make a determination of mitigation.

BIO-2: Desert Native Plant Protection and Relocation Plan

A *Desert Native Plant Protection and Relocation Plan* (Plan) for the proposed Project shall be composed that will provide detailed specifications for the proposed treatment, avoidance, or relocation of all smoke trees (*Cotinus* sp.), species in the Agavacea family, mesquite (*Prosopis* sp.), large creosote bushes (*Larrea* sp.), Western Joshua trees, and any other plants protected by the State Desert Native Plant Act. Further, the Protected Desert Plant Plan will provide measures to meet the requirements of Chapter 16.24 of the City of Hesperia's (City) Municipal Code to protect, preserve, and mitigate impacts to Western Joshua tree. The City's Protected Plant Policy (HMC 16.24) states the following for commercial and industrial projects:

[2] Fish & G. Code § 2081(b); Cal. Code Regs., tit. 14, §§ 783.2-783.8

- The Plan shall be certified by an arborist or registered botanist.
- An application and fee shall be completed and paid to the City of Hesperia.
- Healthy, transplantable Western Joshua trees shall be relocated on-site or may be placed in an adoption program.

The *Desert Native Plant Protection and Relocation Plan* will address requirements of the City's Protected Plant Policy and provide details from the initial survey of the site's Western Joshua trees and other sensitive desert plant species, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees or bushes requiring removal and relocation. Specifically, the Plan will include site location and characteristics; relocation requirements including Western Joshua tree and other sensitive desert plant species report and removal/relocation and transplanting specifics; success criteria and associated necessary fees, protective measures prior to, during and after construction, and maintenance after construction.

5.2 SPECIAL-STATUS WILDLIFE SPECIES

Based on the results of the focused surveys and current site conditions, a review of specific habitat preferences, historical occurrence records, known distributions, and habitat associations, it was determined that Project development will not result in the loss of individual Mohave ground squirrels or desert tortoise, nor will development adversely affect local or regional populations of these species.

Burrowing owl have a high probability of occurrence at the Project Site. While no burrowing owl were observed at the time of the site visit, this species is transient and has the potential to occupy the Project Site prior to development. The followig recommendations are provided to ensure that no impacts occur to burrowing owl.

5.2.1 Avoidance and Minimization Measures

Based on the results of the field survey and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that the Survey Area has a high potential to support Western burrowing owl (SSC and locally significant within the County of San Bernardino).

To ensure there are no impacts to burrrowing owl, it is recommended that a one-day site visit by a qualified biologist be performed within 14-30 days of project construction or ground breaking activities. If burrowing owl are observed at this time CDFW will be contacted to collaborate on methods to remove or discourage owls from occupying the site.

BIO-3: Pre-Construction Western Burrowing Owl Clearance Surveys

In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), two (2) pre-construction clearance surveys should be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. Once surveys are completed, the qualified biologist shall prepare a final report documenting surveys and findings. If no burrowing owls or occupied burrows are detected, Project construction activities may begin. If an occupied burrow is found within the Project Site during pre-construction clearance surveys, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to the County, which may consult with CDFW for review, prior to initiating Project construction activities.

BIO-4: Passive and Active Relocation of Western Burrowing Owls

If Western burrowing owls are observed on the Project Site during preconstruction surveys, CDFW shall be immediately notified to determine if avoidance of the nest is appropriate until the nest is vacated or to gain concurrence from CDFW on active or passive relocation actions. All passive or relocation activities shall be in concurrence with CDFW guidelines (Staff Report on Burrowing Owl Mitigation 2012).

If burrowing owls are present and nesting on-site the following steps shall be necessary to reduce impacts to less than significant. These steps may be augmented by recommendations from CDFW:

a. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that: (1) owls have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
b. A qualified biologist shall exclude all owls from active burrows using one-way doors. Concurrently, all inactive burrows and other sources of secondary refuge for burrowing owls shall be collapsed and removed from the site.
c. Following and 24 to 48-hour observation period, all vacated burrows shall be collapsed.
d. A qualified biologist shall conduct a post-exclusion survey confirming the absence of burrowing owls on the Project Site. Should newly occupied burrows be discovered on the Project Site the exclusion activities shall be repeated.

5.3 NESTING BIRDS AND WILDLIFE MOVEMENT

The Survey Area is surrounded by undeveloped land to the west, and development land to the north, south, and east. Implementation of the Project will not inhibit wildlife from moving to adjacent open space which surrounds the Project Site to the west. Suitable bird nesting habitat

is present (although limited) throughout the Project Site and buffer area. It is recommended to conduct a one-day site assessment for nesting birds within 7-days of project construction or ground-breaking activities. This can be performed concurrently with the burrowing owl site assessment mentioned above.

5.3.1 Avoidance and Minimization Measures

Pursuant to the MBTA (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The following avoidance and minimization measure is recommended to reduce potential impacts to nesting birds to a less than significant level.

Impacts to special-status species designated as endangered, threatened, rare, or a candidate species would require disclosure under CEQA. Impacts to SSC species are not considered significant under CEQA and warrant no legal protection but may simply require CEQA disclosure.

BIO-5: Nesting Bird Preconstruction Surveys

If it is not feasible to avoid the nesting bird season (typically January through July for raptors and February through August for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or directly adjacent to the Project Site. If active nests are located, the extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, the nesting bird survey shall occur no earlier than seven (7) days prior to the commencement of construction.

In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

5.4 REGIONAL CONNECTIVITY

The Project Site does not serve as a wildlife corridor. Therefore, no impacts to regional connectivity or wildlife corridors will occur due to Project development.

5.5 CRITICAL HABITAT

There is no USFWS-designated critical habitat mapped within the Survey Area. Therefore, no impacts to critical habitat are expected to occur as a result of the Project, and no further recommendations or avoidance and minimization measures are warranted.

5.6 JURISDICTIONAL FEATURES ANALYSIS

There are no wetland, waters, or other jurisdictional features on the Project Site. Therefore, no additional surveys or assessments will be recommended and no impacts to jurisdictional features will occur due to Project development.

5.7 CONCLUSION

To the best of our knowledge, this Report is intended to identify additional needs relating to field studies and possible constraints associated with Project development. All figures and species lists were created specifically for this Project and reflect site conditions at the time of the site assessment and focused surveys. Focused surveys for plants and wildlife were performed for this report and can be found in Appendix G.

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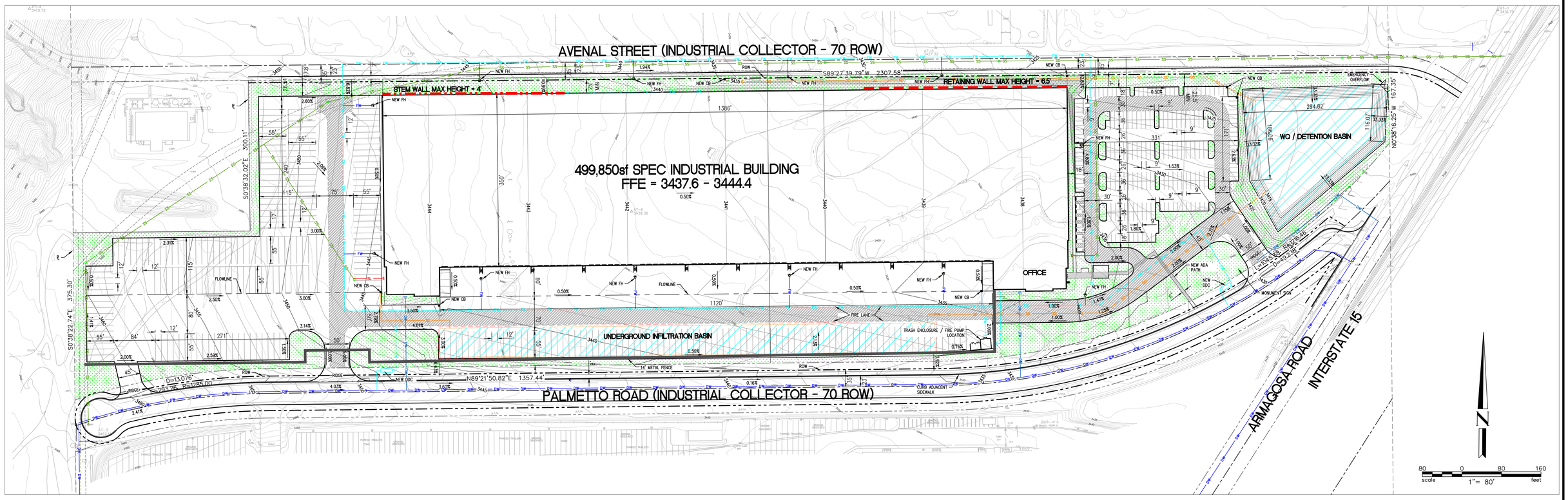
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Appendix A

Conceptual Plans

HESPERIA SPEC INDUSTRIAL
SITE PLAN EXHIBIT
COUNTY OF SAN BERNARDINO



OWNER

RACHAMIN 5, LLC
6001 EAST SLAUSSON AVENUE
COMMERCE, CA 90040
TEL: (213) 769-4222 X107

CONTACT: RAMIN NAMVAR

ARCHITECT

RGA
15231 ALTON PARKWAY, SUITE 100
IRVINE, CA 92618
(949) 341-0923

CONTACT: CHRIS SAVAGE

CIVIL ENGINEER

WESTLAND GROUP, INC.
4150 CONCOURS STREET,
SUITE 100
ONTARIO, CA 91764
(909) 403-5647

CONTACT: MATT KUNKLE

UTILITY PURVEYORS

SCE
PO BOX 6400
RANCHO CUCAMONGA, CA
91729
(760) 951-3253
ATTENTION: JERIMON ROMERO

SOUTHWEST GAS CO.
13471 MARIPOSA ROAD
VICTORVILLE, CA
(760) 951-4053
ATTENTION: DIANE REICHLE

VERIZON
16071 MOHAVE DR BLDG A
VICTORVILLE, CA 92395
(800) 483-3000
ATTENTION: CHRIS THORPE

CITY OF HESPERIA, WATER DIST.
9700 SEVENTH AVE.
HESPERIA, CA 92345
(760) 947-1417

CITY OF HESPERIA, SEWER
9700 SEVENTH AVE.,
HESPERIA, CA 92345
(760) 947-1417

CHARTER COMMUNICATIONS
9536 "C" AVE
VICTORVILLE, CA
(866) 499-8080

LEGAL DESCRIPTION

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL 1:
PARCELS 3 AND 4 OF PARCEL MAP 14386, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 181, PAGES 62 AND 63 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 2:
PARCEL 2 OF PARCEL MAP 17599, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 213, PAGES 54 AND 55 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN 0405-072-52-0-000; 0405-072-53-0-000; 0405-072-55-0-000

PROJECT EARTHWORK DATA

2D GRADING AREA: 170,140 SQ.YD.
CUT: 95,800 CY
FILL: 96,100 CY
NET: 300 CY
NOTE: ALL QUANTITIES ARE UNADJUSTED

HYDROLOGY SUMMARY						
AREA ID	AREA (AC)	TC (MIN)	Q_{100} (CFS)	V_{120} (CF)	Retention Provided (CF)	Total V Provided (CF)
A	6.29	10	16.5	117,301	600,000	600,000 min
B	19.08	10	50.2	379,213		
C	6.22	10	15.9	81,068		
TOTAL	31.59		82.9	582,327		

BASIN SUMMARY TABLE		
BASIN ID	RETENTION VOLUME	TOTAL VOLUME
ABOVE GROUND BASIN	295,000 CF	295,000 CF min
UNDERGROUND INFILTRATION BASIN	305,000 CF	305,000 CF min
TOTAL	600,000 CF	600,000 CF min

EASEMENT NOTES

ITEM A, B & C PERTAIN TO TAX MATTERS

1. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
2. EASEMENT(S) IN FAVOR OF THE PUBLIC OVER ANY EXISTING ROADS LYING WITHIN SAID LAND.
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
3. THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,
   RECORDING DATE: DECEMBER 31, 1948
   RECORDING NO: IN BOOK 2342, PAGE 152 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.
4. THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,
   RECORDING DATE: MAY 10, 1961
   RECORDING NO: IN BOOK 5426, PAGE 35 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.
5. WAIVER OF ANY CLAIMS FOR DAMAGES TO SAID LAND BY REASON OF THE LOCATION, CONSTRUCTION, LANDSCAPING OR MAINTENANCE OF THE STREET OR HIGHWAY ADJOINING SAID LAND, AS CONTAINED IN THE DEED TO COUNTY/CITY/STATE: STATE OF CALIFORNIA
   RECORDING DATE: MAY 10, 1961
   RECORDING NO.: IN BOOK 5426, PAGE 35 OFFICIAL RECORDS
   DOES NOT AFFECT SUBJECT PROPERTY.
6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   DISCLOSED BY: NOTICE OF LIS PENDENS
   CASE NO: 144429
   COURT: SUPERIOR COURT
   PURPOSE: WATER PIPELINE SYSTEM
   RECORDING DATE: MAY 17, 1971
   RECORDING NO: IN BOOK 7669, PAGE 97 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY
   PURPOSE: PUBLIC UTILITIES AND ACCESS
   RECORDING DATE: MARCH 13, 1987
   RECORDING NO: AS INSTRUMENT NO. 1987-081745 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.

EASEMENT NOTES (CONTINUED)

8. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   GRANTED TO: HESPERIA WATER DISTRICT
   PURPOSE: PIPELINE(S) AND PUBLIC PURPOSES AND INGRESS AND EGRESS
   RECORDING DATE: AUGUST 11, 1992
   RECORDING NO: AS INSTRUMENT NO. 1992-333349 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
9. THE LAND DESCRIBED HEREIN IS INCLUDED WITHIN A PROJECT AREA OF THE REDEVELOPMENT AGENCY SHOWN BELOW, AND THAT PROCEEDINGS FOR THE REDEVELOPMENT OF SAID PROJECT HAVE BEEN INSTITUTED UNDER THE REDEVELOPMENT LAW (SUCH REDEVELOPMENT TO PROCEED ONLY AFTER THE ADOPTION OF THE REDEVELOPMENT PLAN) AS DISCLOSED BY A DOCUMENT.
   REDEVELOPMENT AGENCY: HESPERIA COMMUNITY REDEVELOPMENT AGENCY
   RECORDING DATE: JULY 21, 1993
   RECORDING NO: AS INSTRUMENT NO. 1993-310136 OFFICIAL RECORDS
   AND RECORDING DATE: DECEMBER 03, 2007
   AND RECORDING NO: AS INSTRUMENT NO. 2007-0676018 OFFICIAL RECORDS
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
10. VARIOUS MATTERS INCLUDING, BUT NOT LIMITED TO, REQUIREMENTS FOR DEVELOPING OR IMPROVING THE LAND, PROPOSED EASEMENTS, COVENANTS, CONDITIONS, RESTRICTIONS AND PROVISIONS SET FORTH ON PARCEL MAP 14386, IN BOOK 181, PAGES 62 AND 63 OF PARCEL MAPS.
    REFER TO ITEMS 8 & 12.
11. AGREEMENT FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS
    RECORDING DATE: FEBRUARY 07, 1997
    RECORDING NO: AS INSTRUMENT NO. 19970044707 OFFICIAL RECORDS
    BLANKET IN NATURE, CAN NOT BE PLOTTED
12. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
    GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY
    PURPOSE: OVERHEAD ELECTRICAL SUPPLY SYSTEMS AND COMMUNICATION SYSTEMS AND APPURTENANCES
    RECORDING DATE: NOVEMBER 01, 2006
    RECORDING NO: AS INSTRUMENT NO. 2006-0746828 OFFICIAL RECORDS
    AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT

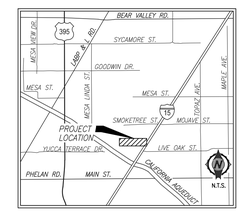
ITEM 13 THROUGH 19 PERTAIN TO TITLE MATTERS

LEGEND

- DOMESTIC WATER LINE — DW
- SANITARY SEWER — SS
- FIRE WATER LINE — FW
- STORM DRAIN LINE — SD
- FIRE HYDRANT
- STREET LIGHT
- PROPERTY LINE
- LANDSCAPE
- SEWER LATERAL
- RETAINING WALL
- STEM WALL
- INFILTRATION BASIN
- NEW SIDEWALK
- FIRE LANE

PROJECT SITE DATA

APPROX. NET INDUSTRIAL SITE AREA:	1,329,521 SF / 30.52 AC
BUILDING AREA:	499,850 SF
COVERAGE:	37.6 %
F.A.R.	0.376
AUTO PARKING REQUIRED:	
10,000 SF OFFICE @ 3.33 / 1000 SF	33 STALLS
489,720 SF WAREHOUSE: 20+0.4/1000 O/10K SF	212 STALLS
TOTAL	245 STALLS
PARKING PROVIDED:	
STANDARD STALLS	244 STALLS
ACCESSIBLE STALLS	7 STALLS
TOTAL STALLS PROVIDED	251 STALLS
DOCK LOADING POSITIONS	72 DOCKS
TRAILER PARKING STALLS	256 TRAILERS
LANDSCAPE PROVIDED	255,000 SF / 19.1 %



VICINITY MAP
N.T.S

WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
14150 Concours Street Suite 100, Ontario, CA 91764
Phone: (909) 989-9789 Fax: (909) 989-9660

CITY OF HESPERIA
SPEC INDUSTRIAL
SITE PLAN EXHIBIT

DRAWN BY:	LG
DESIGNED BY:	MK
CHECKED BY:	MK
SCALE:	1" = 80'
DATE:	JULY 2022
SHT NO.:	1 OF 1

Drawing Name: P:\Proj_2021\2021-168 - Hesperia Industrial - RGA - Chris Savage\06 Engineering\Sheets\CONCEPTUAL\Site Plan Exhibit\01_2021-168_SP.dwg
Last Opened: Jul 14, 2022 - 9:17am by lucas.glauser

Appendix B

Representative Site Photographs



Photograph 1. Looking East across Project Site.



Photograph 2. Looking South at existing building which is off-site.



Photograph 3. Looking Northwest at adjacent off-site utilities.



Photograph 4. Looking Northwest.



Photograph 5. Looking Southeast.



Photograph 6. Looking Southwest.



Photograph 7. Looking North.



Photograph 8. Looking Northeast. This is the largest Joshua tree on the Project Site. Avenal Street is in the background.

Appendix C

Plant Compendia

APPENDIX C

Plant Compendia

The following vascular plant species were observed by CASC at the Palmetto Way Industrial Spec Project Site in Hesperia, California during April – July 2022.

*Indicates introduced nonnative species

SPECIES/SCIENTIFIC NAME	FAMILY/COMMON NAME
ANGIOSPERMAE	***FLOWERING PLANTS***
ASTERACEAE (COMPOSITAE)	*SUNFLOWER FAMILY*
Ambrosia dumosa	common burrobrush
Ambrosia salsola	cheesebrush
Artemisia tridentata	sagebrush
Chaenactis fremontii	Fremont's pincushion
Ericamaria nauseosa	rubber rabbitbush
Eriophyllum conferitflorum	golden yarrow
Geraea canescens	desert sunflower
Gutierrezia microcephala	sticky snakeweed
Stephanomeria pauciflora	desert wirelettuce
Tetradymia axillaris	cottonthorn
BORAGINACEAE	*BORAGE FAMILY*
Amsinckia intermedia	*common fiddleneck*
Amsinckia retrorsa	*rigid fiddleneck*
BRASSICACEAE	*MUSTARD FAMILY*
*Hirschfeldia incana **	shortpod mustard
CACTACEAE	*CACTUS FAMILY*
Cylindropuntia echinocarpa	silver cholla
CHENOPODIACEAE	*GOOSEFOOT FAMILY*
Atriplex canescens	hoary saltbush
Grayia sinosa	*hop sage*
Suaeda nigra	bush seepweed
CUPRESSACEAE	*CYPRESS FAMILY*
Juniperus californica	California juniper

SPECIES/SCIENTIFIC NAME	FAMILY/COMMON NAME
EPHEDRACEAE	*EPHEDRA FAMILY*
Ephedra californica	desert tea
GERIANIACEAE	*GERANIUM FAMILY*
*Erodium cicutarium**	long-beaked filaree
LAMIACEAE (LABIATAE)	*MINT FAMILY*
Salvia dorrii	desert sage
LILIACEAE	*LILY FAMILY*
Yucca brevifolia	Joshua tree
NYCTAGINACEAE	*NIGHTSHADE FAMILY*
Mirabilis laevis	*desert wishbone bush*
ONAGRACEAE	*SUNCUP FAMILY*
Eremothera boothii	*Booth's suncup*
PLANTAGINACEAE	*PLANTAIN FAMILY*
Plantago ovata	*desert plantain*
POLYGONACEAE	*BUCKWHEAT FAMILY*
Eriogonum plumatella	flatopped buckwheat
Eriogonum fasciculatum	California buckwheat
Eriogonum wrightii	bastard sage
PRIMULACEAE	*PRIMROSE FAMILY*
Eremothera boothii ssp. *decorticans*	*desert shredding primrose*
RHAMNACEAE	*BUCKTHORN FAMILY*
Ceanothus leucodermis	chaparral whitethorn
ROSEACEAE	*ROSE FAMILY*
Purshia tridentata	antelope bitterbrush
SOLANACEAE	*NIGHTSHADE FAMILY*
Lycium cooperii	Cooper's box-thorn
ZYGOPHULLACEAE	*CALTROP FAMILY*
Larrea tridentata	creosote bush
MONOCOTYLEDONES	***MONOCOTS***
POACEAE	*GRASS FAMILY*
*Bromus rubens**	red brome
Bromus tectorum	cheat grass
*Poa secunda **	perennial bluegrass

Schismus barbatus	Mediterranean grass

Floral compendia identified during surveys were recorded in terms of relative abundance and host habitat type. Floral taxonomy used in this report follows the *Jepson Manual* (Hickman 1993) and for sensitive species, the *California Native Plant Society Rare Plant Inventory*, 5th Edition (Pavlik and Skinner 1994). Additional common plant names are taken from Munz (1974) and Sawyer and Keeler-Wolf (2009)

Appendix D

Wildlife Compendia

APPENDIX D

Wildlife Compendia

The following is a list of wildlife species recorded aby CASC at the Palmetto Way Industrial Spec Project Site in Hesperia, California April – July 2022. Presence may be noted if a species is seen or hears, or identified by the presence of tracks, scat, or other sign.

*Indicates introduced nonnative species

SPECIES/SCIENTIFIC NAME	COMMON NAME
REPTILIA	***REPTILES***
IGUANIDAE	*IGUANID LIZARDS*
Uta stansburiana	side-blotched Lizard
Aspidoscelis tigris tigris	basin whiptail
Xantusia vigilis	desert night lizard
AVES	***BIRDS***
COLUMBIDAE	*PIGEONS AND DOVES*
Zenaida macroura	mourning dove
CORVIDAE	*CROWS AND RAVENS*
Corvus brachyrhunchos	American crow
Corvus corax	common raven
TROGLODYTIDAE	*WRENS*
Campylorhynchus brumeicapillus	*cactus wren*
FRINGILLIDAE	*FINCHES*
Eremophila alpestris	horned lark
LANIIDAE	SHRIKES
Lanius ludovicianus	*loggerhead shrike*
TYTONIDAE	*OWLS*
Tyto alba	barn owl
MAMMALIA	***MAMMALS***
LEPORIDAE	*RABBITS AND HARES*
Lepus californicus	black-tailed jackrabbit
CANIDAE	*DOGS, FOXES, AND ALLIES*
Canis latrans	coyote (scat and tracks)
SCIURIDAE	SQUIRREL FAMILY
Ammospermophilus leucurus	White-tailed antelope squirrel
HETEROMYIDAE	K-RAT, K-MICE, POCKET MICE FAMILY
Dipodomys sp.	kangaroo rat

Taxonomy and nomenclature follows Beher (1998) and Laudenslayer et.al. (1991. A checklist of the amphibians, reptiles, birds, and mammals of California. California Fish and Game 77:109-141.), Sibley (2000) and the American Ornithologists' Union (1998. The A.O.U. Checklist of North American Birds, 7th Ed. American Ornithologists' Union, Washington D.C.

Appendix E

CNDDB Summary Table and BIOS

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Baldy Mesa (3411744) OR Hesperia (3411743) OR Shadow Mountains SE (3411755) OR Adelanto (3411754) OR Victorville (3411753) OR Phelan (3411745) OR Telegraph Peak (3411735) OR Cajon (3411734) OR Silverwood Lake (3411733))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Accipiter cooperii Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	2,860 3,361	118 S:2	0	0	0	0	0	2	2	0	2	0	0
Agelaius tricolor tricolored blackbird	G1G2 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	2,665 2,665	955 S:1	0	0	0	0	0	1	0	1	1	0	0
Anaxyrus californicus arroyo toad	G2G3 S2S3	Endangered None	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	2,530 3,590	139 S:14	5	2	0	0	0	7	5	9	14	0	0
Antrozous pallidus pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	2,820 2,820	420 S:1	0	0	0	0	0	1	0	1	1	0	0
Aquila chrysaetos golden eagle	G5 S3	None None	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern	2,760 2,760	325 S:1	0	0	0	0	0	1	1	0	1	0	0
Artemisiospiza belli belli Bell's sage sparrow	G5T2T3 S3	None None	CDFW_WL-Watch List	2,782 2,782	61 S:1	0	0	0	0	0	1	0	1	1	0	0
Asclepias nyctaginifolia Mojave milkweed	G4? S2	None None	Rare Plant Rank - 2B.1		67 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Asio otus long-eared owl	G5 S3?	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	3,220 3,880	56 S:2	0	0	0	0	0	2	2	0	2	0	0
Aspidoscelis tigris stejnegeri coastal whiptail	G5T5 S3	None None	CDFW_SSC-Species of Special Concern	2,767 2,767	148 S:1	0	0	1	0	0	0	0	1	1	0	0
Astragalus lentiginosus var. antonius San Antonio milk-vetch	G5T2 S2	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive	5,000 6,200	12 S:3	0	1	0	0	0	2	1	2	3	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	100 3,700	2011 S:39	1	15	13	6	2	2	4	35	37	1	1
Batrachoseps gabrieli San Gabriel slender salamander	G2G3 S2S3	None None	IUCN_DD-Data Deficient USFS_S-Sensitive	3,600 4,200	8 S:2	0	0	0	0	0	2	2	0	2	0	0
Bombus crotchii Crotch bumble bee	G2 S1S2	None None		3,000 6,000	437 S:6	0	0	0	0	0	6	6	0	6	0	0
Botrychium ascendens upswept moonwort	G3 S2	None None	Rare Plant Rank - 2B.3 USFS_S-Sensitive	7,000 7,000	53 S:1	0	0	0	0	0	1	1	0	1	0	0
Botrychium crenulatum scalloped moonwort	G4 S3	None None	Rare Plant Rank - 2B.2 USFS_S-Sensitive	7,000 7,000	155 S:1	0	0	0	0	0	1	1	0	1	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	880 2,700	2548 S:2	0	0	0	0	2	0	2	0	0	2	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Calochortus palmeri var. palmeri Palmer's mariposa-lily	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	3,200 3,800	111 S:4	0	0	0	0	0	4	2	2	4	0	0
Calochortus plummerae Plummer's mariposa-lily	G4 S4	None None	Rare Plant Rank - 4.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,780 5,900	230 S:17	0	3	3	1	0	10	6	11	17	0	0
Canbya candida white pygmy-poppy	G3G4 S3S4	None None	Rare Plant Rank - 4.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,700 3,900	30 S:6	0	0	0	0	0	6	6	0	6	0	0
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	G2? S2?	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,750 3,750	46 S:2	0	0	1	0	0	1	2	0	2	0	0
Chaetodipus fallax pallidus pallid San Diego pocket mouse	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	2,700 2,700	79 S:2	0	0	0	0	0	2	2	0	2	0	0
Charina umbratica southern rubber boa	G2G3 S2S3	None Threatened	USFS_S-Sensitive	5,000 5,000	74 S:1	0	0	0	0	0	1	1	0	1	0	0
Chorizanthe xanti var. leucotheca white-bracted spineflower	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive	2,435 5,500	59 S:5	2	0	0	0	0	3	2	3	5	0	0

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Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Claytonia peirsonii ssp. peirsonii Peirson's spring beauty	G2G3T2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	8,000 8,380	9 S:3	0	3	0	0	0	0	1	2	3	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive	2,800 2,800	165 S:1	0	0	0	0	1	0	1	0	0	1	0
Corynorhinus townsendii Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	2,630 2,630	635 S:1	0	0	0	0	0	1	1	0	1	0	0
Deinandra mohavensis Mojave tarplant	G2 S3	None Endangered	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,100 3,189	84 S:2	0	0	0	0	0	2	0	2	2	0	0
Diadophis punctatus modestus San Bernardino ringneck snake	G5T2T3 S2?	None None	USFS_S-Sensitive	3,498 3,647	14 S:2	2	0	0	0	0	0	0	2	2	0	0
Diplacus mohavensis Mojave monkeyflower	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,800 3,500	61 S:2	0	1	0	0	0	1	2	0	2	0	0
Empidonax traillii extimus southwestern willow flycatcher	G5T2 S1	Endangered Endangered	NABCI_RWL-Red Watch List	2,680 2,770	70 S:4	3	1	0	0	0	0	1	3	4	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	780 3,135	1404 S:4	1	3	0	0	0	0	1	3	4	0	0
Eremothera boothii ssp. boothii Booth's evening-primrose	G5T4 S3	None None	Rare Plant Rank - 2B.3	2,600 2,880	35 S:6	0	0	1	1	0	4	4	2	6	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Euchloe hyantis andrewsi Andrew's marble butterfly	G4G5T1 S1	None None		4,800 5,000	6 S:2	0	0	0	0	0	2	2	0	2	0	0
Eumops perotis californicus western mastiff bat	G4G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority		296 S:1	0	0	0	0	0	1	1	0	1	0	0
Euphydryas editha quino quino checkerspot butterfly	G5T1T2 S1S2	Endangered None		5,000 5,000	186 S:1	0	0	0	0	1	0	1	0	0	0	1
Glaucomys oregonensis californicus San Bernardino flying squirrel	G5T1T2 S1S2	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	4,600 4,600	12 S:2	0	1	0	0	0	1	1	1	2	0	0
Gopherus agassizii desert tortoise	G3 S2S3	Threatened Threatened	IUCN_VU-Vulnerable	2,690 3,700	985 S:10	0	6	4	0	0	0	2	8	10	0	0
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive	3,120 5,150	332 S:3	0	1	0	0	0	2	3	0	3	0	0
Helianthus nuttallii ssp. parishii Los Angeles sunflower	G5TX SX	None None	Rare Plant Rank - 1A	5,000 5,000	7 S:1	0	0	0	0	0	1	1	0	1	0	0
Helminthoglypta mohaveana Victorville shoulderband	G1 S1	None None	IUCN_NT-Near Threatened	2,640 2,800	2 S:2	0	0	0	0	0	2	2	0	2	0	0
Helminthoglypta taylori westfork shoulderband	G1 S1	None None		3,034 3,377	6 S:6	0	0	0	0	1	5	2	4	5	0	1
Heuchera parishii Parish's alumroot	G3 S3	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	5,100 5,100	70 S:1	0	1	0	0	0	0	0	1	1	0	0
Icaricia saepiolus aureolus San Gabriel Mountains blue butterfly	G5T1 S1	None None	USFS_S-Sensitive	6,000 6,000	2 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Icteria virens yellow-breasted chat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,740 2,740	101 S:1	0	1	0	0	0	0	1	0	1	0	0
Juniperella mirabilis juniper metallic wood-boring beetle	G1 S1	None None		4,300 4,300	2 S:1	0	0	0	0	0	1	0	1	1	0	0
Lanius ludovicianus loggerhead shrike	G4 S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,719 3,424	110 S:4	0	1	3	0	0	0	0	4	4	0	0
Lasiurus cinereus hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:1	0	0	0	0	0	1	1	0	1	0	0
Lilium parryi lemon lily	G3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	6,100 7,150	160 S:4	0	1	0	0	0	3	3	1	4	0	0
Linanthus concinnus San Gabriel linanthus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	5,700 8,400	43 S:6	0	1	0	0	0	5	2	4	6	0	0
Loeflingia squarrosa var. artemisiarum sagebrush loeflingia	G5T3 S2	None None	Rare Plant Rank - 2B.2 BLM_S-Sensitive	3,300 3,300	26 S:1	0	0	1	0	0	0	0	1	1	0	0
Lycium parishii Parish's desert-thorn	G4 S1	None None	Rare Plant Rank - 2B.3		21 S:1	0	0	0	0	1	0	1	0	0	0	1
Microtus californicus mohavensis Mohave river vole	G5T1 S1	None None	CDFW_SSC-Species of Special Concern	2,600 2,700	6 S:3	0	0	0	0	0	3	2	1	3	0	0
Monardella australis ssp. jokerstii Jokerst's monardella	G4T1? S1?	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	4,450 4,450	3 S:1	0	0	0	0	0	1	1	0	1	0	0
Muhlenbergia californica California muhly	G4 S4	None None	Rare Plant Rank - 4.3	7,000 7,000	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Neotamias speciosus speciosus lodgepole chipmunk	G4T3T4 S2S3	None None		4,920 4,920	24 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

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California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Opuntia basilaris var. brachyclada short-joint beavertail	G5T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,500 6,300	199 S:72	3	10	10	1	0	48	18	54	72	0	0
Oreonana vestita woolly mountain-parsley	G3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	6,400 8,960	55 S:5	1	1	0	0	0	3	4	1	5	0	0
Orobanche valida ssp. valida Rock Creek broomrape	G4T2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	5,700 6,300	12 S:2	0	1	0	0	0	1	1	1	2	0	0
Ovis canadensis nelsoni desert bighorn sheep	G4T4 S3	None None	BLM_S-Sensitive CDFW_FP-Fully Protected USFS_S-Sensitive		46 S:1	0	0	0	0	0	1	1	0	1	0	0
Palaeoxenus dohrni Dohrn's elegant eucnemid beetle	G3? S3?	None None		4,000 4,000	3 S:1	0	0	0	0	0	1	0	1	1	0	0
Pandion haliaetus osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	3,396 3,396	504 S:1	0	0	0	0	0	1	0	1	1	0	0
Pediomelum castoreum Beaver Dam breadroot	G3 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,657 3,310	26 S:3	0	0	0	1	0	2	2	1	3	0	0
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,600 5,290	784 S:19	0	2	1	0	1	15	17	2	18	0	1
Piranga rubra summer tanager	G5 S1	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,670 2,780	21 S:2	0	1	0	0	0	1	2	0	2	0	0

Summary Table Report

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California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Plebulina emigdionis San Emigdio blue butterfly	G1G2 S1S2	None None	USFS_S-Sensitive	2,450 2,702	11 S:4	0	0	2	0	0	2	2	2	4	0	0
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	2,750 3,120	1671 S:2	0	0	0	0	0	2	2	0	2	0	0
Rana muscosa southern mountain yellow-legged frog	G1 S1	Endangered Endangered	CDFW_WL-Watch List IUCN_EN-Endangered USFS_S-Sensitive	3,200 3,500	186 S:2	0	0	0	0	2	0	2	0	0	1	1
Rhinichthys osculus ssp. 8 Santa Ana speckled dace	G5T1 S1	None None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern USFS_S-Sensitive	2,500 2,500	13 S:1	0	0	1	0	0	0	1	0	1	0	0
Schoenus nigricans black bog-rush	G4 S2	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern USFS_S-Sensitive	3,000 5,000	13 S:5	0	0	0	0	0	5	3	2	5	0	0
Scutellaria bolanderi ssp. austromontana southern mountains skullcap	G4T3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,700 3,140	43 S:2	0	0	0	0	0	2	1	1	2	0	0
Setophaga petechia yellow warbler	G5 S3S4	None None	CDFW_SSC-Species of Special Concern	2,700 3,660	78 S:2	0	1	0	0	0	1	1	1	2	0	0
Siphateles bicolor mohavensis Mohave tui chub	G4T1 S1	Endangered Endangered	AFS_EN-Endangered CDFW_FP-Fully Protected	2,660 3,400	24 S:7	0	0	0	0	6	1	6	1	1	2	4
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	G4 S4	None None		3,300 3,300	230 S:1	0	0	0	0	0	1	1	0	1	0	0
Symphyotrichum defoliatum San Bernardino aster	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank USFS_S-Sensitive	2,730 3,400	102 S:2	0	0	0	0	0	2	2	0	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Symphyotrichum greatae Greata's aster	G2 S2	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	3,440 3,440	56 S:1	0	0	0	0	0	1	1	0	1	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	3,301 3,301	594 S:1	0	0	0	0	0	1	1	0	1	0	0
Thamnophis hammondii two-striped gartersnake	G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	2,956 3,498	184 S:4	1	2	0	0	0	1	1	3	4	0	0
Toxostoma lecontei Le Conte's thrasher	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	2,698 4,100	238 S:8	0	0	1	0	0	7	7	1	8	0	0
Vireo bellii pusillus least Bell's vireo	G5T2 S2	Endangered Endangered	IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List	2,590 2,760	504 S:7	0	5	1	0	0	1	1	6	7	0	0
Vireo vicinior gray vireo	G5 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFS_S-Sensitive	3,200 3,260	28 S:2	0	0	0	0	0	2	2	0	2	0	0
Xerospermophilus mohavensis Mohave ground squirrel	G2G3 S2S3	None Threatened	BLM_S-Sensitive IUCN_VU-Vulnerable	2,520 3,460	432 S:12	0	2	1	0	2	7	8	4	10	1	1

California Rare Plant Rank

The California Rare Plant Rank status applies to plants only. The California Rare Plant Ranks are a ranking system originally developed by the California Native Plant Society (CNPS) to better define and categorize rarity in California's flora. These ranks were previously known as the CNPS lists but were renamed to the California Rare Plant Ranks to better reflect the joint effort among the CNPS, the CNDDB, and a wide range of botanical experts, who work together to assign a rarity ranking. All plants tracked by the CNDDB are assigned to a California Rare Plant Rank category. These categories are:

CA Rare Plant Rank	Description
1A	Plants presumed extinct in California and rare/extinct elsewhere
1B.1	Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2	Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California
1B.3	Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A	Plants presumed extirpated in California, but more common elsewhere
2B.1	Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California
2B.2	Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California
2B.3	Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
3.1	Plants about which we need more information; seriously threatened in California
3.2	Plants about which we need more information; fairly threatened in California
3.3	Plants about which we need more information; not very threatened in California
4.1	Plants of limited distribution; seriously threatened in California
4.2	Plants of limited distribution; fairly threatened in California
4.3	Plants of limited distribution; not very threatened in California

California Department of Fish and Wildlife Status

The California Department of Fish and Wildlife (CDFW) Status applies to animals only. The possible values for CDFW Status are:
T = Threatened E = Endangered

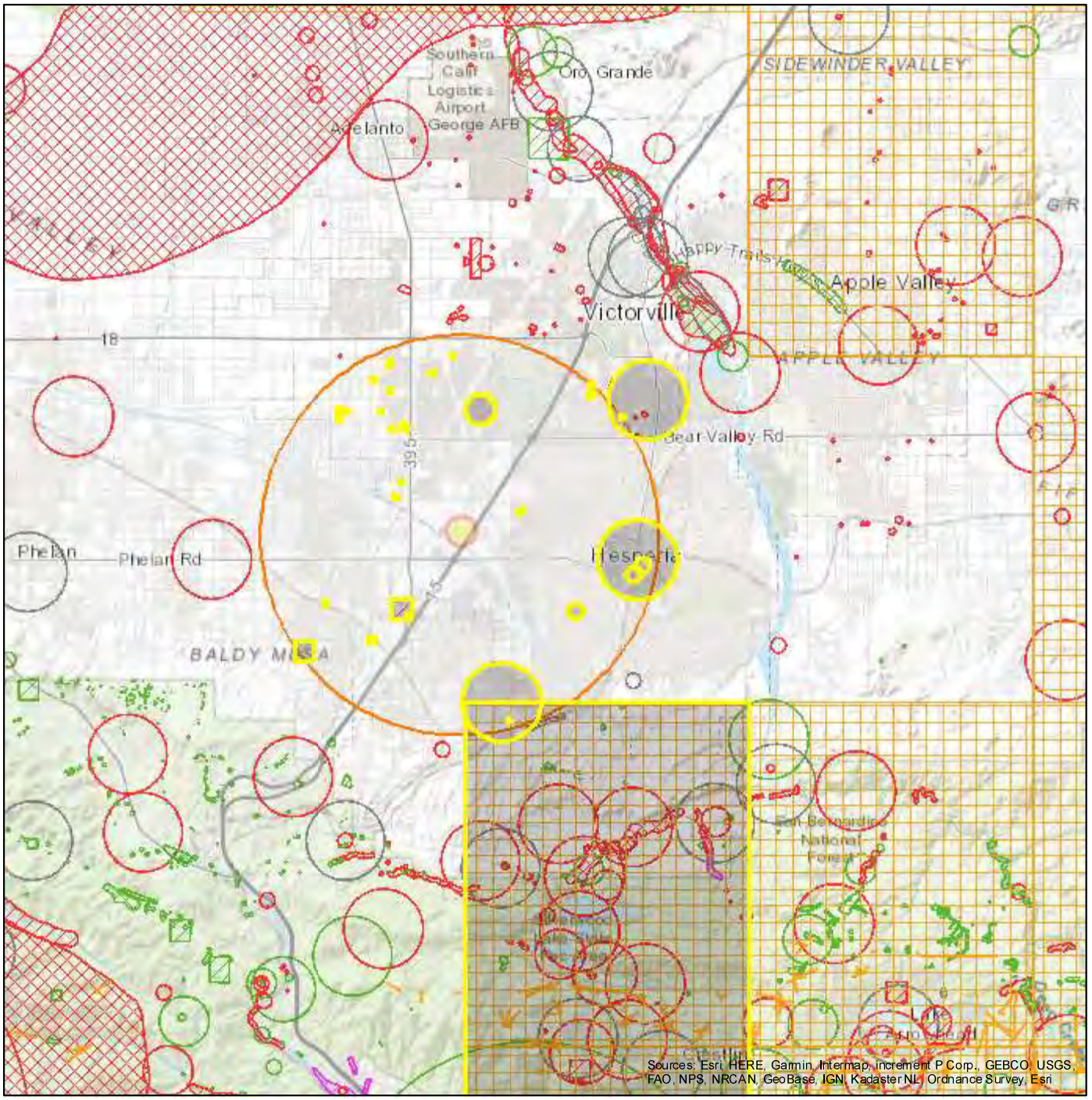
Status	Description
FP	Fully Protected: This classification was the State of California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.
SSC	Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.
WL	Watch List: The Department of Fish and Wildlife maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Map of Project Area 5-mile radius Palmetto Way

Spotted Owl Observations Spider Diagram [ds705]

California Natural Diversity Database (CNDDB) Commercial [ds85]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)



1:288,895

0 2.5 5 10 mi

0 4 8 16 km

N

March 28, 2022

Author: kboydstun@cascinc.com

Printed from http://bios.dfg.ca.gov

Appendix F

National Wetlands Inventory Map

U.S. Fish and Wildlife Service
National Wetlands Inventory

Palmetto Way Industrial Spec Project



September 5, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix G

Focused Survey Report

BURROWING OWL FOCUSED SURVEY REPORT

Amargosa Road & Palmetto Way Spec. Industrial Project

City of Hesperia, San Bernardino County, California

APN #s: 0405-072-[52-53, 55]



Prepared for:
RACHAMIM 5, LLC
6001 E. Slauson Avenue
Commerce, CA 90040

Contact: Mr. Ramin Namvar
213.769.4222 ext. 107
ramin@titaniumfabrics.com

Prepared by:
CASC Engineering and Consulting, Inc.
27710 Jefferson Avenue, Suite 105
Temecula, CA 92590

Contact: Kimberly Boydstun
Senior Biologist/Project Manager
kboydstun@cascinc.com
951.216.9933

October 2022

Cover Photo Credit: Brandon Trentler

CASC
Engineering and Consulting

October 24, 2022

RACHAMIM 5, LLC
Attn: Mr. Ramin Namvir
6001 E. Slauson Avenue
Commerce, CA 90040
Office: 213.769.4222 ext. 107
ramin@titaniumfabrics.com

SUBJECT: BURROWING OWL FOCUSED SURVEY REPORT
AMARGOSA ROAD & PALMETTO WAY SPEC INDUSTRIAL PROJECT, HESPERIA, CA.

Dear Mr. Namvir,

At the request of Rachamim 5, LLC, CASC Engineering and Consultants (CASC) has prepared this Burrowing Owl Focused Survey Report for compliance with the State of California Natural Resource Agency, Department of Fish and Game, Staff Report on Burrowing Owl Mitigation (March 7, 2012) (Staff Report) guidelines to determine presence/absence of burrowing owl within San Bernardino County.

A habitat assessment for burrowing owl (BUOW) was conducted from April 27, 2022, and focused surveys were conducted June – August 2022. While suitable burrowing owl (*Athene cunicularia)* habitat was absent on the Project Site, no burrowing owl or their sign was observed during the focused surveys. This report documents the methods and results of the literature review and field surveys and provides a summary of the BUOW's natural history, existing site conditions within the Biological Study Area (BSA) and the determination of a no presence study results.

INTRODUCTION

BUOW habitat assessment and focused surveys were conducted in accordance with the Burrowing Owl Staff Report Guidelines approved for use of determination within the County of San Bernardino. CASC conducted a literature review and BUOW Habitat Assessment of the entire Project Site and within a 150-meter (500 feet) buffer area around the Project Site. The Project Site and the buffer area defined as the biological study area (BSA) in this report. The habitat assessment determined the presence of suitable habitat potentially supporting BUOWs. CASC then conducted a focused assessment to potentially locate suitable burrows and burrowing owls. The purpose of the surveys was to determine BUOW presence or absence within the BSA. If present, the surveys would also help to determine BUOW distribution and abundance within the BSA, and breeding status.

PROJECT LOCATION

The Project Site is located on Palmetto Way, in Hesperia, San Bernardino County, California (Figure 1, Regional Vicinity). The property consists of three parcels, Accessor's Parcel Number: 0405-075- [52, 53,55] US Geological Society (USGS) 7.5-minute *Baldy Mesa* Quadrangle (Figure 2, USGS Map), Township 4 north, range 5 west, (latitude 117.3777327°W, longitude 34.4366696°N).

PROJECT DESCRIPTION

Rachamim 5, LLC (Project Proponent) proposes to construction of a 498,500 square foot Industrial Warehouse Building (Project) with up to 25,000 square feet of office space. The proposed Project will include 76 loading dock doors, 182 truck/trailer parking spaces and 281 auto parking spaces on three (3) parcels (APNs: 0405-072-52, 53, and 55) consisting of approximately 30.52 undeveloped acres within the City of Hesperia in the Regional Commercial Zone. The parcels are bounded on the north and west by Avenal Street, south by Palmetto Way, and Amargosa Road to the east. Three (3) entrances to the site are provided, one (1) on the east side from Palmetto Way, one (1) from Palmetto Way on the south side of the site, and a proposed third entrance/exit onto Palmetto Way from the truck/trailer parking area at the southwest corner of the site. The facility will be built on spec and will be designed to accommodate 500 to 600 employees; there is no tenant currently attached to the project.

BURROWING OWL NATURAL HISTORY

The BUOW is a small, crepuscular (active at dusk and dawn), ground-inhabiting owl that is found largely throughout the southern United States. Its overall length is about seven to ten inches. Coloring is sandy brown on its head, back and upper wings, with noticeable white spotting on its back and upper wings. Adults are barred on their breast, while juveniles are buffy with a white collar. The brown and white mottling helps to provide camouflage in their preferred dry habitats. BUOWs have yellow eyes, long legs, a short tail, with relatively long, narrow wings and a flat, round head. Their long legs help them to see over grasses and short vegetation and aid them in catching their prey (Sibley 2000).

Typical BUOW habitat is open, dry, flat ground or low rolling hills with sparse vegetation and available burrows (Gallagher, 1997). BUOWs spend most of their time on the ground or on low perch sites such as fence posts and dirt mounds. They are generally found in open country, where tree or shrub canopies cover less than 30% of the habitat (CBOC 1997). Typical habitats include annual and perennial grasslands, shortgrass prairies open agricultural areas (particularly rangelands), desert floors, and vacant lots in residential areas and ruderal fields. Other habitats include oak savannah; grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitat; sandy beaches and coastal dunes; and river bottom lands. The BUOW is primarily a dry grassland species, but it persists and can even thrive in some landscapes that are highly altered by human activity. They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows (Shuford et al. 2008). They are the only small owl likely to be seen perched in the open daylight (Sibley 2000).

Nest and roost burrows of the BUOW in California are most commonly excavated by California ground squirrels (*Spermophilus beecheyi*), but they may use American badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox dens or holes (CDFW 2012). Where burrows are scarce, man-made structures, such as culverts, piles of concrete, rubble, or debris, pipes, asphalt, artificial nest boxes, and openings beneath cement or asphalt pavement also are used as nest sites (CDFW 2012). Both natural and artificial burrows provide protection, shelter, and nest sites.

Nest burrows are usually three to nine feet long, with a downward slope, a “J” or “U” shaped bend, and an enlarged nest chamber at the end. Usually, the immediate area about the burrow is barren and devoid of vegetation. Adults usually return to the same burrow or a nearby area each year. Adult males often use one or more “satellite” burrows near the nest burrow during the nesting period (CBOC 1997). Both sexes prepare the burrow for nesting using their feet, beaks, and wings to scrape out dirt.

BUOWs often nest in loose colonies and members can alert each other to the approach of predators and join in harassment of them. During the nesting season, adult males forage over home ranges 0.8 to 1.16 square miles (2 to 3 square kilometers) and the ranges of neighboring males may overlap considerably (Shuford et al. 2008). A small territory around the nest burrow is aggressively defended against intrusions by other BUOWs, squirrels, and predators. Nesting season for the BUOW in California (courtship and egg laying) occurs between February 1 and August 30 (CDFW 2012). Actual breeding occurs anywhere from March through August, with the peak activity in April and May. The peak of the breeding season occurs between April 15 and July 15 and is the period when most BUOWs have active nests (eggs or young) (CDFW 2012).

Suitable BUOW habitat must also support the primary prey items for BUOWs, such as insects and small mammals. BUOWs are opportunistic predators preying primarily on a broad array of arthropods (centipedes, spiders, beetles, crickets, and grasshoppers), and small rodents, but they also eat birds, amphibians, reptiles, and carrion. They may hunt from a perch, hover, hawk, run, walk, dive or hop after prey.

BURROWING OWL STATUS AND PROTECTION

Federal and State Protection

While BUOW has no federal protection status, BUOW is designated by California Department of Fish and Wildlife (CDFW) as a Species of Special Concern. This status is given a species, subspecies, or distinct population of an animal (fish, amphibian, reptile, bird and mammal) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria: is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role; is listed as federally, but not state-, threatened or endangered; meets the state definition of threatened or endangered, but has not formally been listed; is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status; or has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status. The goal of designating species as species of special concern is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.

Burrowing owls are also protected from direct “take” (defined in this case as killing, injuring, or causing failure of an active nesting effort) by both the federal Migratory Bird Treaty Act and the California Fish and Game Code (Sections § 3503, § 3503.5, and § 3513) and Migratory Bird Treaty Act (MBTA) of 1918 (Title 16, United States Code sections 703-712).

Local Protection

Burrowing owl are considered locally significant as their populations have declined in recent years. The City of Hesperia follows the CDFG 2012 Staff Report guidelines and recommends surveys be performed on Project Sites where suitable habitat is present.

STUDY METHODS

Survey protocol followed the *Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency, Department of Fish and Game March 7, 2012, Appendix C Habitat Assessment and Report Details, Appendix D Breeding and Non-breeding Season Surveys and Reports*.

Literature Review

To identify the biological resources that exist within the BSA and project vicinity, biologists reviewed relevant literature, databases, agency web sites, reports, management plans, Geographic Information System (GIS) data, maps, and aerial imagery. This desktop analysis was conducted prior to the field surveys and is described below.

The California Natural Diversity Database (CNDDB) was accessed on March 28, 2022 and was used to determine if and to what extent BUOWs occur on and adjacent to the Project Site. Records corresponding to the USGS 7.5-Minute Topographic Map Quadrangle were obtained.

Field Survey Methodology

The entire 30.52-acre site was surveyed along with a 500-foot buffer to the west and a portion of the buffer to the northeast of the Project Site (Figure 3, Survey Area and Transects). The buffer areas to the north of the project are several fenced residential lots, east is east is Interstate 15, and to the south is an industrial building, and west is open space. Surveys were conducted during the daytime on foot from April 27, 2022 through August 10, 2022. Surveys were not conducted during abnormal or excessive cold, heat, wind, rain, or other inclement weather. The biologists gained direct access to all areas within the project area for 100-percent visual coverage. Biologists used Global Positioning System (GPS) units and other GIS and survey-related techniques (Collector App), to collect locational data and record relevant attributes of features or species encountered. Digital color photographs were taken during the field surveys to record site conditions at the time of the field surveys. Representative Site Photos are show in Figures 4a-4d. Potential burrows and their location within the BSA were recorded using Collector and are shown in Figure 5, Potential Burrow Locations and Photo Point Locations.

BUOW HABITAT ASSESSMENT AND FOCUSED SURVEYS

Step I: Habitat Assessment.

Biologists characterized the existing land cover and searched for the presence of suitable BUOW habitat within the Project Site and within a 500-foot buffer to the Project Site where accessible (Figure 3). Buffers to west included undeveloped land, to the north residential properties, to the south an industrial building, and to the east Amargosa Road and Interstate 15. Only the buffer to the west and a small portion to the northeast of the Project Site was surveyed as the other areas were inaccessible (fenced residential properties) or developed. One hundred percent visual coverage was obtained within the entire Project Site (30.52-acres) and the buffers.

The BSA is in a region of San Bernardino County known as the “High Desert” due to its approximate elevation of 3,600 feet above mean sea level (amsl). Much of the Survey Area is relatively flat, with surface elevations varying between approximately 3,468 feet amsl in the southwestern corner to approximately 3,443 feet amsl in the northeastern corner. Identification of habitats and plant communities within the BSA were based on observed dominant species. Generally, classifications of habitat types or vegetation communities were based on Holland’s *Preliminary Descriptions of the Terrestrial Communities of California* (Holland 1986) and *A Manual of California Vegetation Second Edition* (Sawyer et al. 2009) with modifications to better represent existing site conditions.

Step II: Locating Burrows and Burrowing Owls.

Surveys were conducted from sunrise to 10:00 a.m. when weather conditions were conducive to BUOWs. Suitable BUOW habitat areas were identified during the initial habitat assessment (Step I, BUOW Habitat Assessment). Step II surveys were conducted within accessible portions of the BSA that contained BUOW

essential habitat (nesting, foraging, wintering, and dispersal habitat). Where topography and access was suitable, the biologists walked parallel straight-line belt transects spaced no more than 30 meters apart to allow 100% visual coverage of the survey area. In inaccessible areas, biologists used binoculars to gain visual coverage of any inaccessible features. Each transect was walked at a pace that allowed careful observations along the transect route and the vicinity (Figure 3).

Biologists searched for suitable BUOW burrows and examined the entrances of all potential burrows for BUOW sign (i.e. tracks, molted feathers, cast pellets,1 prey remains, eggshell fragments, BUOW whitewash, nest burrow decoration materials [e.g., paper, foil, or plastic items (CDFW 2012). Biologists also searched rock piles and man-made culverts and pipes for BUOW sign. Biologists identified, recorded, and mapped with Collector App all potential burrows, occupied burrows, and sign of BUOW (Figure 3).

SURVEY RESULTS

Vegetation on the Project Site was classified as *Larrea tridentata-Ambrosia dumosa Shrubland Alliance*. Plant species nomenclature and taxonomy followed *The Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al. 2012). The Project Site is undeveloped and has been disturbed by grading which appears to have been from some time ago as the vegetation is growing back but is of small stature. Impacts will encompass the entire 30.52-acres of the Project Site. The vegetation community within the Survey Area was identified as Larrea tridentata-Ambrosia dumosa Shrubland Alliance with dominant species being white bursage (*Ambrosia dumosa*), creosote bush (*Larrea tridentata*) and Mexican tea (*Ephedra trifurca*). Joshua tree (*Yucca brevifolia*) (CDFW Candidate Listed species) is present on the Project Site. Potentially suitable burrows were recorded using Collector App within the BSA (Figure 3, Survey Area and Transects). A photo point location map is provided in Figure 4. And representative site photographs are included in Figures 5a-d. A habitat assessment was conducted on April 27, 2022 and focused surveys for BUOW were conducted beginning on June 2, 2022 through August 10, 2022. Table 1 shows the date, times and specific field conditions associated with each survey date.

Table 1. Survey Information

Survey Date (2018)	Survey Type	Survey Time	Temperature Range (°F)	Cloud Cover (%)	Wind Speed (mph)	Surveyor
04/27/2022	Habitat Assessment	0900-1630	58-83°F	clear	1-3mph	KB, CP
06/02/2022	Focused BUOW Survey #1	0615-1130	59-83°F	clear	0-2mph	KB
06/27/2022	Focused BUOW Survey #2	0630-1030	61-75°F	100% clearing to 0%	0-2mph	KB
07/20/2022	Focused BUOW Survey #3	0535-1015	66-83°F	clear	0-1mph	KB
08/10/2018	Focused BUOW Survey #4	0550-1055	68-91°F	0-10%	0-2mph	KB
KB - Kim Boydstun CP – Cory Peterson						

[1] Defined as one to two inches long brown to black regurgitated pellets consisting of non-digestible portions of the owls' diet, such as fur, bones, claws, beetle elytra, or feathers.

RECOMMENDATIONS AND FINDINGS

Burrowing owl was not observed nor was any sign detected at the Project Site or within the buffer area during the 2022 surveys. Since there is likely to be a substantial amount of time between the 2022 survey, ground-breaking activities and subsequent project development a preconstruction BuOw survey is recommended.

- *Conduct a 30-day preconstruction Burrowing Owl Survey be performed by a qualified biologist recognized by the County of San Bernardino. After the survey, a technical memorandum of findings shall be prepared and sent to the California Department of Fish and Wildlife (CDFW), Environmental Programs Department (EPD) at the County of Riverside, and the Regional Conservation Authority.*

- *If the Project Site is found positive for burrowing owl, coordination with CDFW will be mandatory and additional exclusionary and relocation efforts will be necessary.*

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological and natural resources report, and that the facts, statements, and information presented are true and correct to the best of my knowledge.

Kimberly Boydstun
Senior Biologist/Project Manager
CASC Engineering and Consulting, Inc.
October 24, 2022

FIGURES

Figure 1: Regional Vicinity Map
Figure 2: USGS Map
Figure 3: Survey Area and Transects
Figure 4: Photo Point Location Map and Potential Burrow Locations
Figure 5a-d: Representative Site Photos

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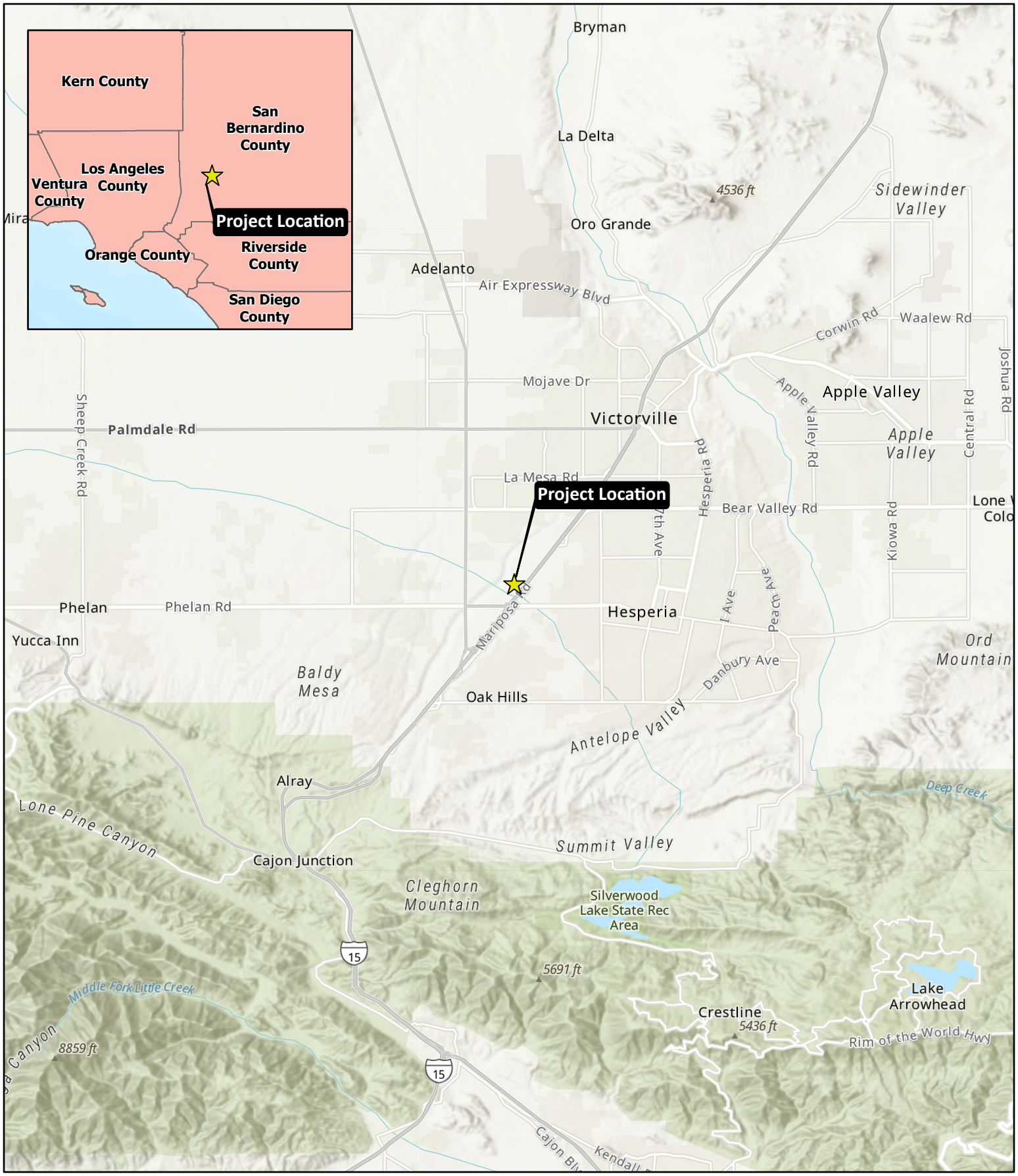
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CASC Engineering and Consulting
www.cascinc.com

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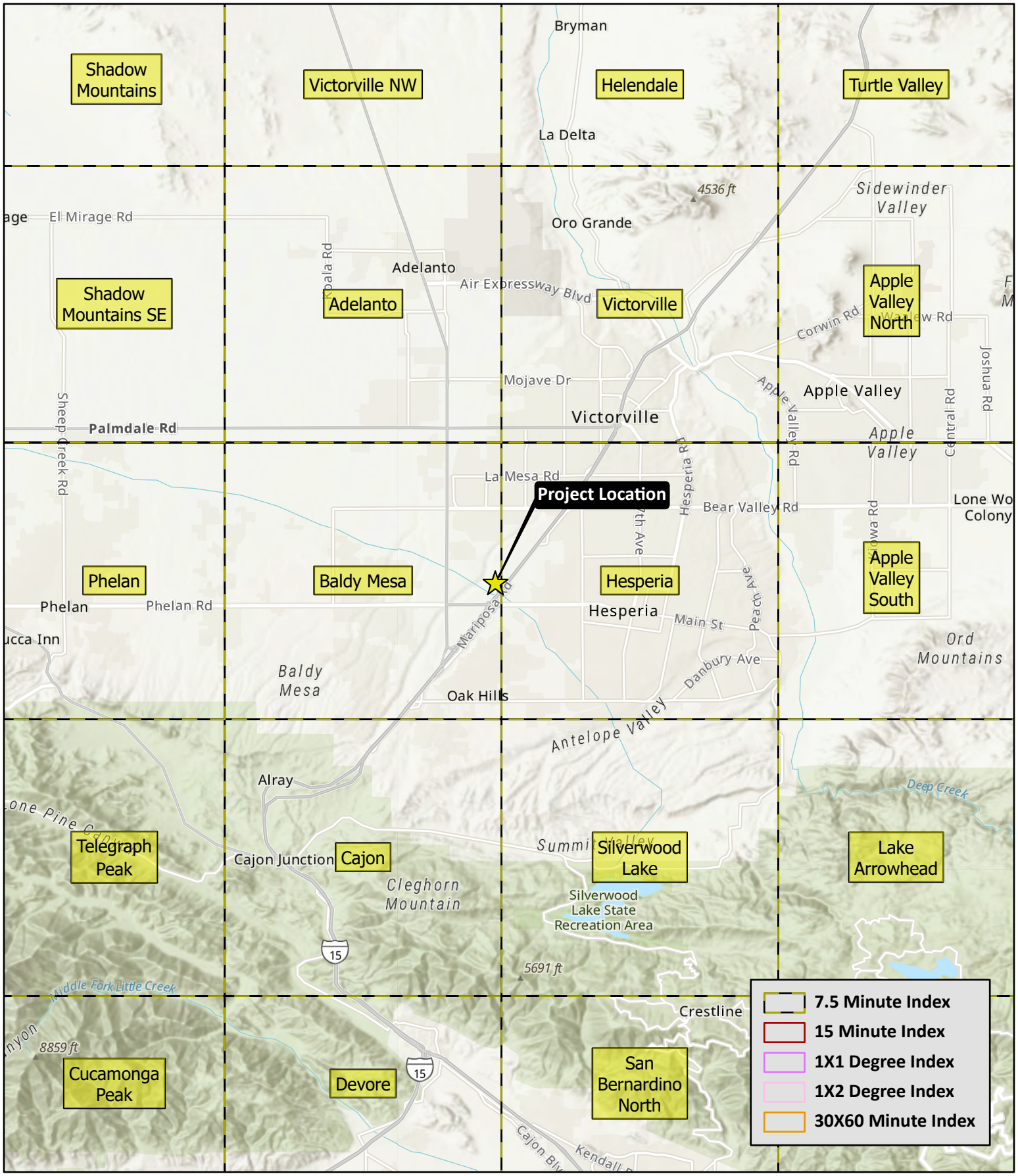
1" = 3.95 miles

Figure 1
Regional Vicinity

APN: 0405-072-[52,53,55]

City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, NASA, NGA, USGS, Esri, USGS

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.
BURROWING OWL FOCUSED SURVEY REPORT



CASC Engineering and Consulting
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N

0 2.5 5 10

1" = 3.95 miles

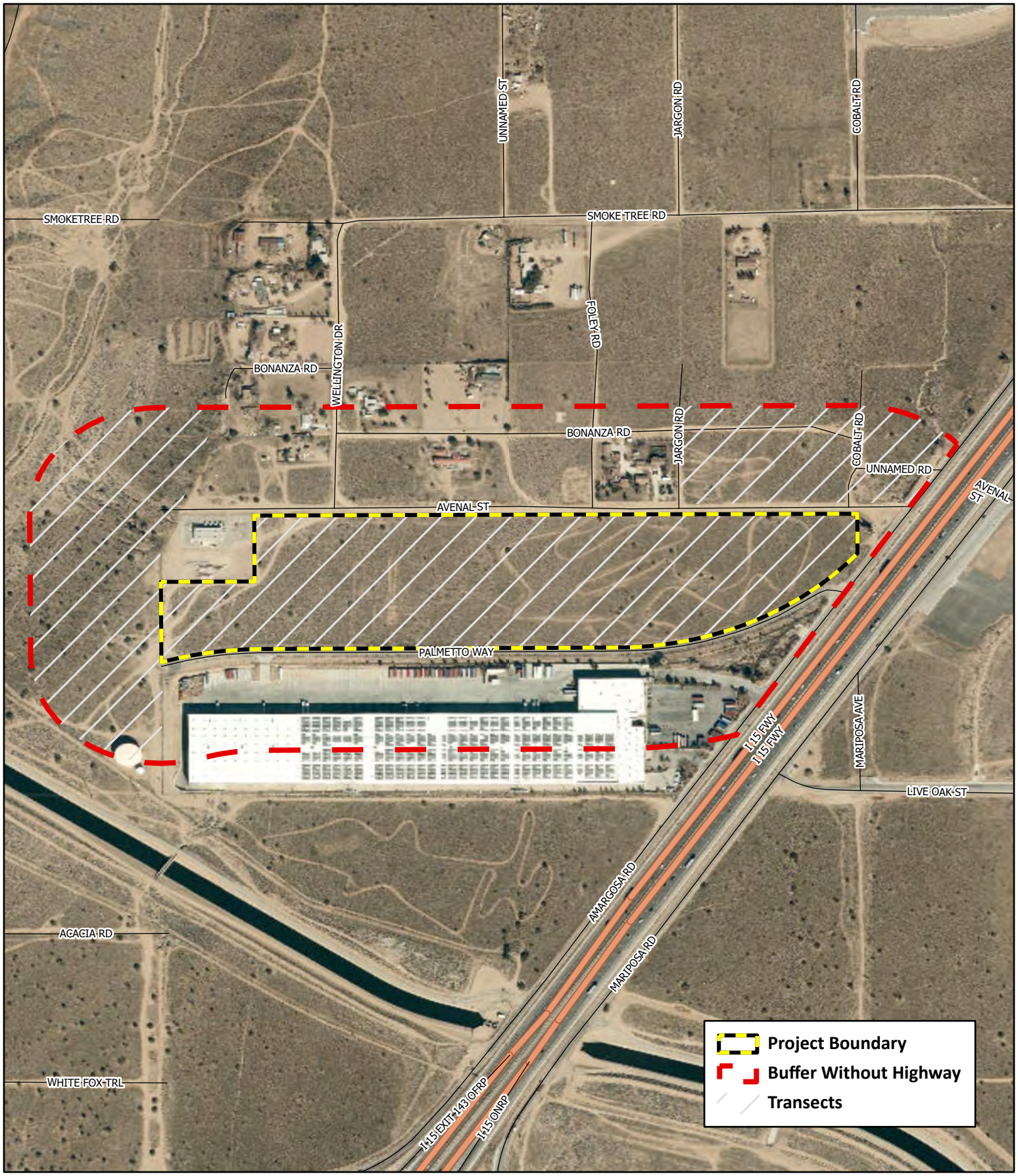
City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, CGIAR, USGS

Figure 2

USGS

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.



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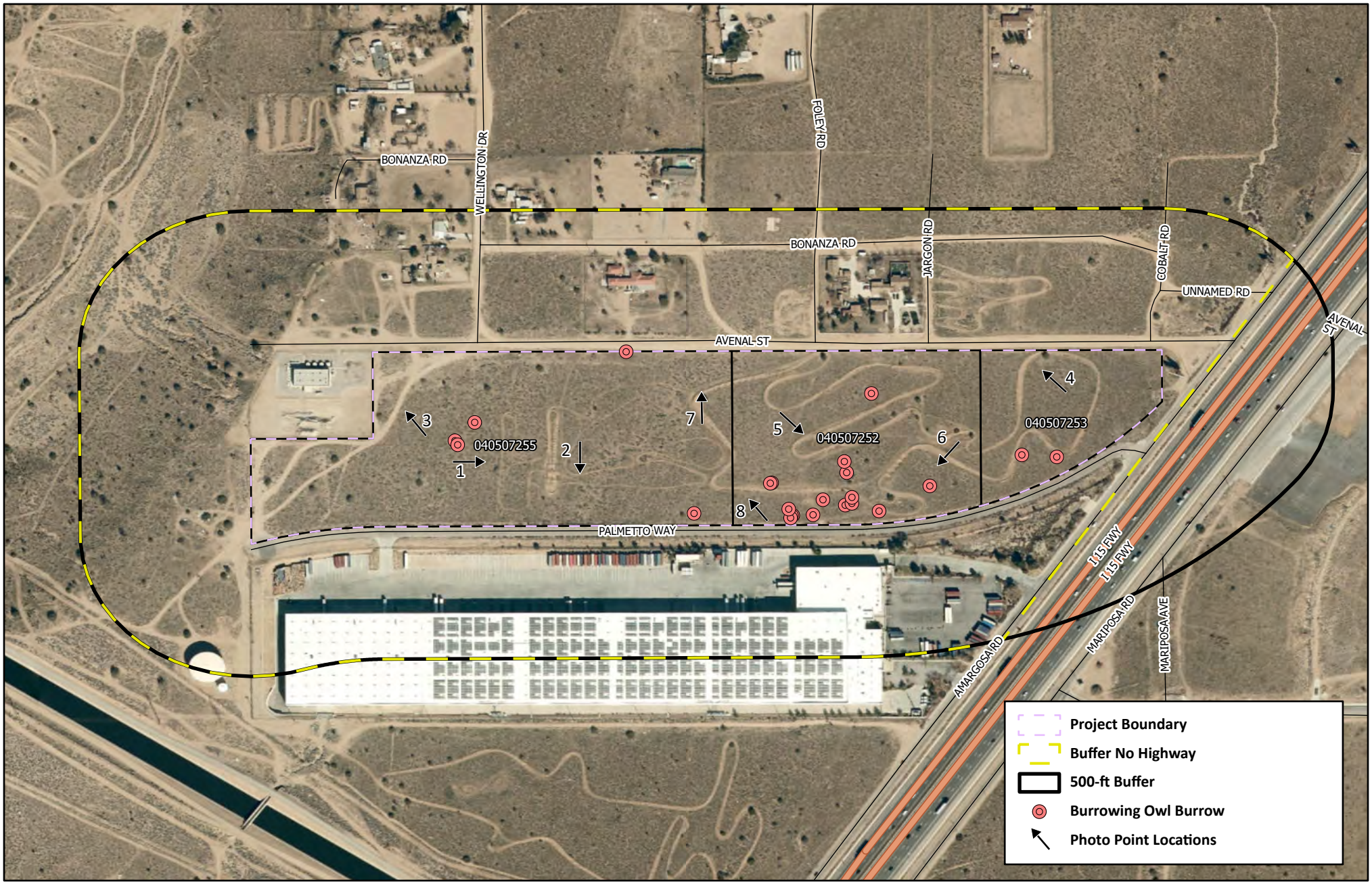
N

0 250 500 1,000
1" = 585 Feet

San Bernardino County, Maxar

Figure 3
Survey Area and Transects

APN: 0405-072-[52,53,55]



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N

0 250 500 1,000

1" = 460 Feet

San Bernardino County, Maxar

Figure 3
Potential Burrow Locations and Photo Point Locations

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec Industrial Project, Hesperia, CA



Photograph 1. Looking East across Project Site.



Photograph 2. Looking South at existing building which is off-site.



Photograph 3. Looking Northwest at adjacent off-site utilities.



Photograph 4. Looking Northwest.

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FIGURE 5b
SITE PHOTOGRAPHS
Amargosa Road & Palmetto Way Spec. Industrial Project, Hesperia, CA.



Photograph 5. Looking Southeast.



Photograph 6. Looking Southwest.

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FIGURE 5c
SITE PHOTOGRAPHS
Amargosa Road & Palmetto Way Spec. Industrial Project, Hesperia, CA.



Photograph 7. Looking North.



Photograph 8. Looking North at a potential BuOw burrow..

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FIGURE 5d
SITE PHOTOGRAPHS
Amargosa Road & Palmetto Way Spec. Industrial Project, Hesperia, CA.

Mohave Ground Squirrel -MGS (*Xerospermophilus mohavensis)*
Desert Tortoise -DT (*Gopherus agassizii*)
Vegetation and Rare Plant
Survey Results for
Amargosa Road and Palmetto Way Industrial Facility Project, Hesperia, Ca.



Site Acreage 30.52 Acres

APN 040507255/54/53/52

Prepared by:

ENVIRA
P. O. Box 2612
Ramona, CA 92065
Phone: 619-885-0236
E-mail: phvergne@aol.com

Trapping Surveys Conducted On:
April 5 to 9, 2022
May 23 to 27, 2022
June 14 to 18, 2022

Report Date:
August 21, 2022

Prepared For:

CASC
Engineering and Consulting

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Appendix A MOHAVE GROUND SQUIRREL TRAPPING SUMMARY FORM

Appendix B MOU

1.0 EXECUTIVE SUMMARY

The project site is within the historical range of the Mohave ground squirrel *Xerospermophilus mohavensis*)-MGS, a state-Threatened species; within the historical range of the federally listed Desert tortoise (*Gopherus agassizii*)-DT; and several listed plant species.

Philippe Vergne of ENVIRA was contracted by CASC Engineering to conduct focused surveys for the MGS, DT, and rare plant surveys for the Amargosa Road and Palmetto Way Industrial Facility.

The proposed project is for the construction of a warehouse facility and related improvements. The proposed project is located in Hesperia, California at the junction of Amargosa Road and Palmetto Way.

This report documents the findings of the focused surveys for the Project Site. The intended use of this document is to disclose the presence or absence of MGS, DT, and rare plants within the project limits. For the purposes of this document, the Project's study area is the area outlined in Figure 1.

The MGS was not captured on the current project site during the 2022 protocol survey as described in this report. The desert tortoise is not present within the proposed project footprint nor the zone of influence. No rare plants were documented on site. **The Project Site does not currently support MGS, desert tortoise, or rare plants.**

Implementation of the Project will not result in the loss of individual MGS, nor will it adversely affect local or regional MGS populations; it will not result in the take of DT or impacts to occupied habitat; no rare plants were documented on site and no take will occur.

2.0 PROJECT AND PROPERTY DESCRIPTION

The proposed project is for the construction of an industrial warehouse facility and related improvements. The proposed project is located in Hesperia, California to the North of Palmetto Way and to the West of Amargosa Road (Figure 1).

The project site is within the historical range of the Mohave ground squirrel (MGS, *Xerospermophilus mohavensis*), a state-Threatened species; within the historical range of the federally listed Desert tortoise (*Gopherus agassizii*); and within the range of several listed plant species. The proposed project site contains habitat considered suitable for the above mentioned species.

The project site is an undeveloped mostly flat area with a slight southwest slope.

Figure 1. Site Vicinity and Project Boundary



2.1 SITE VEGETATION

The disturbed annual grasslands which dominate the site vegetation and sparse scrub understory on site are dominated by fiddleneck, brome, and forbs. Joshua Trees are scattered throughout the site. The severely impacted scrub community shows remnants of Saltbush, California Juniper, and isolated creosote bush (Table1).



Photo 1 - Looking northwest across site.



Photo 2 - Looking northeast across site.

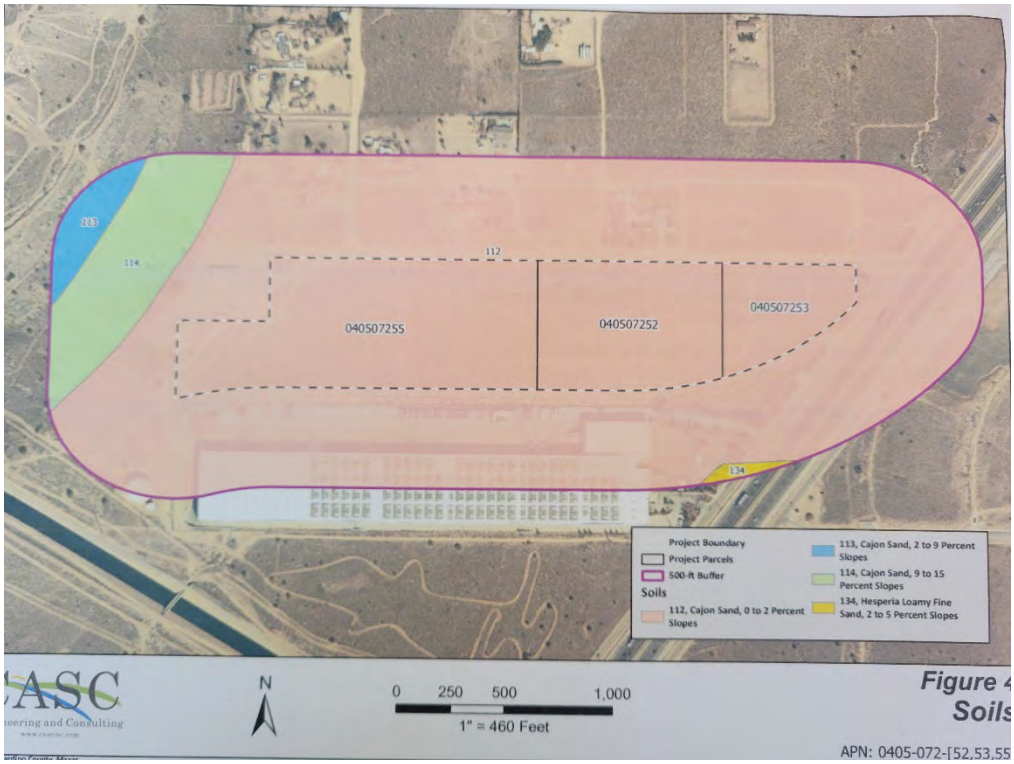
Table 1. Site Vegetation

Common Name	**Scientific Name**
California juniper	*Juniperus californica*
Burro bush or white bur sage	*Ambrosia dumosa*
Desert sunflower	*Geraea canescens*
Fremont pincushion	*Chaenactis fremontii*
Cheese bush	*Hymenoclea salsola*
Antelope bush	*Purshia tritendata*
Flat-topped buckwheat	*Eriogonum plumatella*
California buckwheat	*Eriogonum fasciculatum*
Great basin sagebrush	*Artemisia tritendata*
Coopers box-thorn	*Lycium cooperi*
Desert sage	*Salvia dorii*
Woody bottle washer	*Camissonia boothii*
Plantain	*Plantago insularis*
Cotton thorn	*Tetradymia axillaris*
Creosote bush	*Larrea tridentata*
Hop sage	*Grayia sinosa*
Snakeweed	*Gutierrezia microcephala*
Rabbit brush	*Chrysothamnus nauseosus*
Nevada ephedra	*Ephreda nevadensis*
Joshua tree	*Yucca brevifolia*
Red brome	*Bromus madritensis*
Cheat grass	*Bromus tectorum*
Perennial bluegrass	*Poa secunda*
Mediterranean grass	*Schismus barbatus*
Red stemmed filaree	*Erodium cicutarium*

2.2 SITE TOPOGRAPHY AND SOILS

The project site is an undeveloped portion north of Palmetto Way, to the West of Amargosa Road (adjacent to the 15 Freeway). The valley floor is almost flat. Elevation ranges from 3,443 to 3,468 feet. The soils on the site are Cajon sands, and Hesperia loamy fine sands (Figure 2).

Figure 2. Project Soils Map (Source: CASC Engineering)



The site occurs on the 7.5" *Baldy Mesa* quadrangle USGS Quadrangle Map (Township 4N, Range 5W) Surrounding land uses include the California Aqueduct to the east, Avenal Street to the north, Disturbed open space to the south, and Interstate Highway 15 to the west.

2.3 WILDLIFE

Observations of wildlife included scat, trails, tracks, burrows, skeletal remains, calls and visual sightings. Animal species observed are shown in Table 2.

Table 2. Animal Species Observed

Common name	Scientific Name
Reptiles	
Side-blotched lizard	*Uta stansburiana*
Basin whiptail	*Aspidoscelis tigris tigris*
Desert night lizard	*Xantusia vigilis*
Birds	
Cactus wren	*Campylorhynchus brunneicapillus*
Common raven	*Corvus corax*
Horned lark	*Eremophila alpestris*
Barn owl	*Tyto alba*
Loggerhead shrike	*Lanius ludovicianus*
Mammals	
Black-tailed jack rabbit	*Lepus californicus*
Coyote	*Canis latrans*
White-tailed Antelope squirrel	*Ammospermophilus leucurus*
Kangaroo rat	*Dipodomys sp.*

3.0 Regulatory Background, Mohave Ground Squirrel, Desert Tortoise and Rare Plants

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans and relevant documents were reviewed to determine the locations and types of biological resources that have the potential to exist within and adjacent to the study area; resources within several miles of the Project Site were evaluated.

The materials reviewed included, but were not limited to, the following:

1. U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2013a);
2. USFWS Ventura Field Office Species List for San Bernardino County (2013b);
3. California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW 2013);
4. California Native Plant Society (CNPS) Electronic Inventory (CNPS 2021);
5. Aerial Photographs (Microsoft Corporation 2013);
6. Previous biological reports prepared for immediately adjacent sites (Brylski 2012; Vergne 2017); and
7. Leitner Current Status of MGS.

Regulatory Framework

Federal Endangered Species Act

The USFWS administers the federal Endangered Species Act (FESA) that provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The FESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is a species that is likely to become endangered in the foreseeable future. A "proposed" species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the FESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

California Endangered Species Act

The CDFG administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

Sections 3503 and 3511 of California Fish and Game Code

The CDFG administers the California Fish and Game Code. There are particular sections of the Code that are applicable to natural resource management. For example, Section 3503 of the Code states it is

unlawful to take, possesses, or needlessly destroy the nest or eggs of any bird. Section 3511 of the Code lists fully-protected bird species, where the CDFG is unable to authorize the issuance of permits or licenses to take these species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union.

Section 404 of the Federal Clean Water Act

Section 404 of the federal Clean Water Act, which is administered by the Corps regulates the discharge of dredge and fill material into waters of the United States. The Corps has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. Normally, the Corps requires an individual permit for an activity that will affect an area equal to or in excess of 0.3 acre of waters of the United States. Projects that result in impacts to less than 0.3 acre of waters of the United States can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. The Corps also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.3 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

Section 1600 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife, and also has jurisdiction over dry washes that carry water ephemerally during storm events.

Section 401 of the Clean Water Act

Section 401 of the Clean Water Act requires that "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the Corps will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB).

Porter Cologne Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" (water code 13260(a)), pursuant to provisions of the State Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)).

Mohave Ground Squirrel

The MGS was listed as a rare species in 1971 under the authority of the California State Endangered Species Act of 1970 (CESA) and was re-designated as a state threatened species in 1985 (Gustafson 1993). The MGS is small, grayish, diurnal squirrel. The California Department of Fish and Wildlife (CDFW) is the responsible agency that provides for its protection and management.

MGS are dormant in the fall and winter months, but emerge from hibernation in February and begin pair bonding and mating during March (Gustafson 1993). If rainfall is adequate, MGS will reproduce. If rainfall levels are not sufficient to support substantial annual plant growth, then MGS will merely forage on herbaceous perennials and shrubs until they gain ample body mass for another prolonged period of dormancy (Gustafson 1993). The adult males can enter dormancy as early as late May. Juveniles will remain above-ground until August in order to acquire generous fat reserves prior to entering dormancy.

The site is within the historic range of the Mohave ground squirrel. MGS occur in the western half of the Mojave Desert (Lightner 2012) (Figure 3). Its historical range encompasses an area between Antelope Valley and Lucerne Valley, in the south (Gustafson 1993). However, MGS occurrences in the southern portion of its range are very unusual. The northern limits of the range are near Owens Dry Lake bed, in the north, and through China Lake Naval Weapons Station and Fort Irwin Military Base in the east (Gustafson 1993). The eastern limit of the species range extends to Barstow and south along the Mojave River. The western limits loosely follow State Highway 14 and the foothills of the southern Sierra Nevada escarpment (Gustafson 1993). Several other common squirrels occur within their range; antelope ground squirrel (AGS; *Ammospermophilus leucurus*), round-tailed ground squirrel (RTGS; *Xerospermophilus tereticaudus*) and the California ground squirrel (CGS; *Spermophilus beecheyi*).

Figure 3. MGS Distribution from Lightner 2012

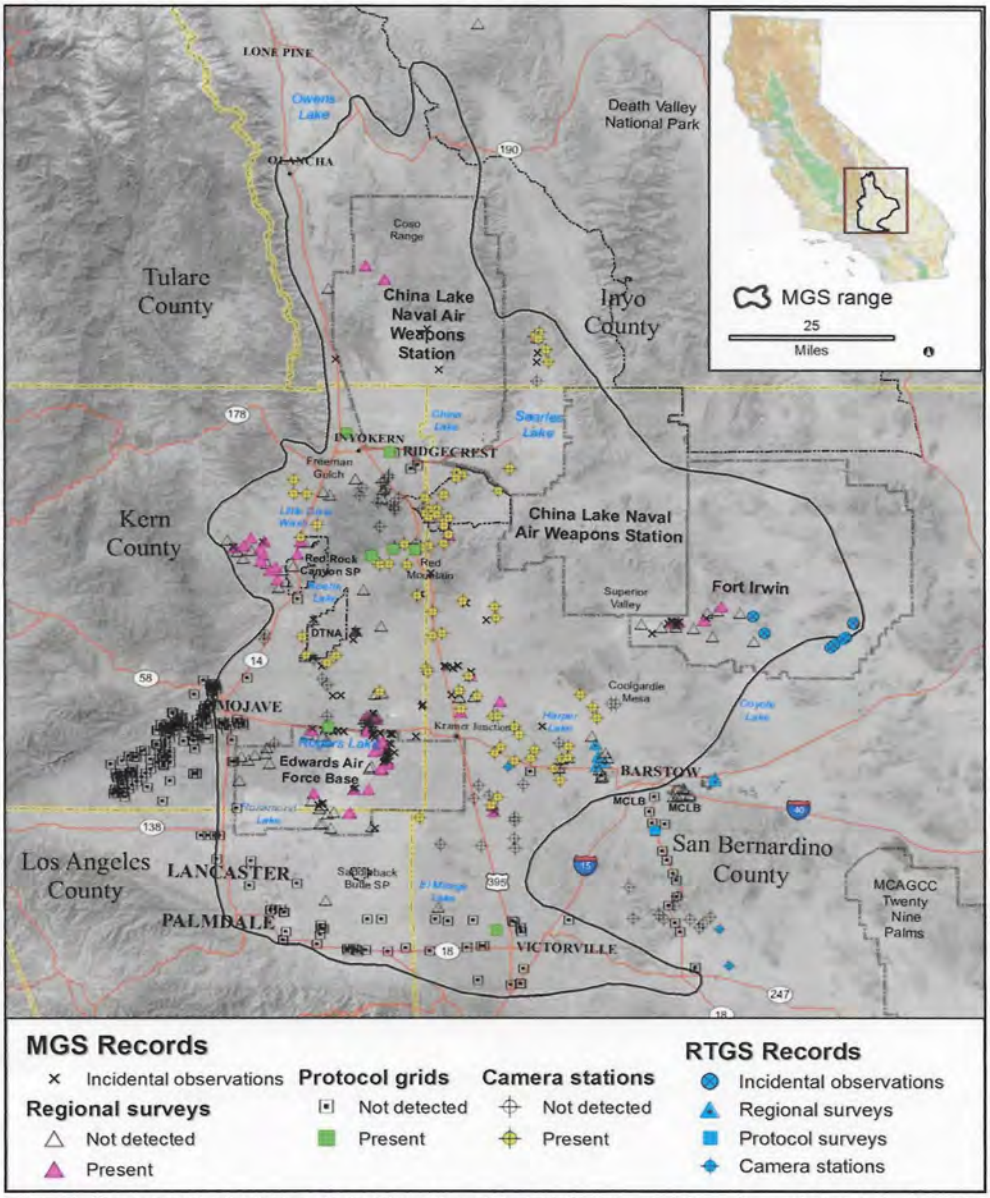


FIGURE 1. The geographic distribution of all Mohave Ground Squirrel (*Xerospermophilus mohavensis*) records for the period 2008–2012. Occurrences of the Round-tailed Ground Squirrel (*Xerospermophilus tereticaudus*) in the contact zone between the two species are also shown.

Desert Tortoise

The desert tortoise (*Gopherus agassizii*) is a desert dwelling reptile that occurs throughout the Mojave and Sonoran deserts. It is found in California, Nevada and Utah, occurring in almost every type of habitat except dry lakes or playas, sand dunes and sand sheets and rocky slopes.

Tortoises construct underground burrows as living quarters, and spend most of the year down in the burrows. They come out for forage in the early spring (February and March) and remain active above ground until early June, when they retreat to their burrows for most of the summer, fall and winter months. They will emerge and be active during the fall months of September and October, depending upon late summer weather conditions. Although they stay underground for most of the year, tortoises can be found active above ground at all times of the year.

Tortoises forage on spring annual wildflowers and grasses. During the foraging season, they also breed and lay eggs in preparation for the next spring.

The desert tortoise hibernates or estivates underground for much of the year as an adaptation to the extreme temperature changes characteristic of desert winters and summers. As a result, determining whether desert tortoise is present in a particular area is generally restricted to locating sign, or evidence, of recent activity.

The tortoise has been undergoing a decline in population due to a number of factors. These include loss or destruction of habitat, killing or harming of animals in the wild, collection of individual animals, raven predation and disease.

The CDFW listed the desert tortoise as threatened on June 22, 1989. The tortoise was emergency listed as endangered by the USFWS on August 4, 1989. The USFWS listing was later changed to threatened. Both listings were made based on populations declining due to the factors listed above. The discovery that the tortoise was rapidly disappearing throughout its range as a result of a disease known as Upper Respiratory Disease Syndrome (URDS) was a critical part of the listing decisions.

This species is known to occur throughout the project general region. Figure 4 depicts the USFW Service critical habitat for the desert tortoise. Figure 5 the desert tortoise distribution in the Mohave desert.

Figure 4. USFWS Desert Tortoise Critical Habitat

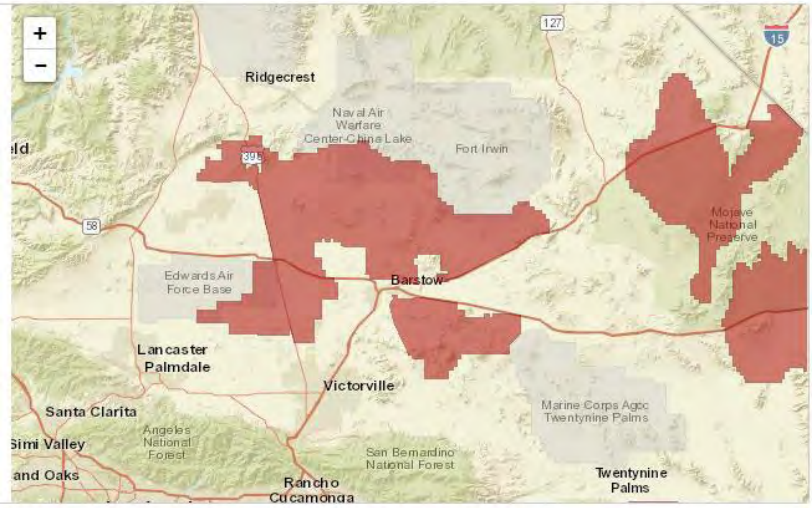


Figure 5. Desert Tortoise Distribution for Mohave Desert



Rare Plants

Several rare plants are listed as possibly occurring within the proposed project area (Table 3).

Table 3. Rare Plants in Project Vicinity

Parish's brittlescale *Atriplex parishii*	Annual. Alkali flats largely in valley or annual grassland. From cismontane California to the edge of the desert, extending into the Central Valley.
Ayenia *Ayenia compacta*	Perennial. Mojave Desert scrub, Sonoran Desert scrub. Sandy and gravelly washes in the desert. Dry desert canyons. 150 to 1095meters elevation
Lincoln rockcress *Boechera lincolnensis*	Perennial that grows on carbonate soils in chenopod(saltbush) and Mojave desert scrub plant communities. The historical distribution was limited to Inyo County and extending to Utah. It has since been found in the San Bernardino and Kingston mountain ranges, elevations from 3600 feet to 8800 feet.
Alkali mariposa lily *Calochortus striatus*	Alkaline meadows and in moist areas in creosote bush scrub. Historically distributed from Mojave Desert at the northern base of the San Bernardino and San Gabriel Mountains east to Las Vegas.
Pygmy poppy *Canbya candida*	Grows in sand flats in creosote bush scrub, Joshua tree woodland. Western Mojave from Walker Pass to Victorville. 2000 to 4000 feet elevation.
White-bracted spine flower *Chorizanthe xanti* var. *leucotheca*	Annual herb. Mojave Desert scrub, pinyon juniper woodlands. 300 to 1200 meters in elevation.
Booth's evening primrose *Eremothera boothii* ssp. *boothii*	Annual herb. Joshua tree woodland, and pinyon-juniper woodland in the Therange for this species is in the Mojave and Colorado deserts. It blooms from April through September at elevations from 2600 to 7900 feet.

Survey for the above-mentioned plants periods ranged from April to July depending on species. Transects for rare plants were conducted concurrent with the MGS surveys. Transects were walked over the entire site on April 6, May 26, and July 7.

4.0 LITERATURE REVIEW

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans and relevant documents were reviewed to determine the locations and types of biological resources that have the potential to exist within and adjacent to the study area; resources within several miles of the Project Site were evaluated.

The materials reviewed included, but were not limited to, the following:

8. U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2013a);
9. USFWS Ventura Field Office Species List for San Bernardino County (2013b);
10. California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW 2013);
11. California Native Plant Society (CNPS) Electronic Inventory (CNPS 2013);
12. Aerial Photographs (Microsoft Corporation 2013); and
13. Previous biological reports prepared for nearby sites (Brylski 2012; CASC 2022, Vergne 2017, 2020,2021)
14. Leitner Current Status of MGS.

5.0 METHODS FOCUSED SURVEYS

Mohave Ground Squirrel

Survey methods were derived from generally accepted professional standards including the 2010 California Department of Fish and Game Mohave Ground Squirrel Survey Guidelines (CDFG 2010); and performed under the auspices of a Memorandum of Understanding (MOU) with the CDFW.

Per protocol, since no MGS were captured, three five-day trapping session were conducted.

Within the grid, 100 traps were deployed at less 35-meter (m) spacing due to property size (Figure 6). The grid consisted of a ten by ten array covering most of the site. Standard small-mammal aluminum, foldable, ventilated 12–inch Sherman Traps were used within the Project Site for sampling purposes. The bait used consisted of crushed four-way grains with horse supplement. Folding cardboard boxes held down by dirt were deployed as shade covers for each trap as appropriate. Traps and shade covers were configured to provide the greatest shade cover possible.

Figure 6. MGS Trapping Grid



Temperature readings were taken and recorded every hour, at 1 foot above the ground and at ground level in the shade. Traps were checked every 1-2 hours depending on temperature and other environmental influential factors (i.e., pregnant or lactating females in traps, feral dogs on grid, cold weather, presence of juveniles, etc.). Traps were open within 1 hour after sunrise and closed within 1 hour before sunset. Traps were closed when air temperature reached 90 °F. Traps were not opened until AM temperatures reached 50 °F. No rain occurred during the surveys. Weather data is given in Table 6.

During live trapping surveys, plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded. The presence of a wildlife species was based on direct observation and/or wildlife

sign (e.g., tracks, burrows, nests, scat, or vocalization). Field data compiled for wildlife species included scientific name, common name, and evidence of sign when no direct observations were made. Wildlife of uncertain identity was documented and subsequently identified from specialized field guides and related literature. A reference list is provided in Section 9.0.

Desert Tortoise

Desert tortoise surveys were conducted according to protocol by covering the entire project site by walking east to west transects ten meters apart, and the zone of influence surveys-ZOI.

Surveys were conducted on April 8 and 9 of 2022.

The zone of influence **(ZOI)** includes parallel transects of 100, 300, 600, 1200 and 2400-feet for Tortoises. The zone of influence was completed until being bisected by the Canal, fencing, development and private property boundaries.

Survey temperatures ranged from mid-fifties to mid-eighties, and winds ranged from 5 to 12 mph.

6.0 SURVEY RESULTS

Project Site in Relation to MGS Historical Range

The project site is located at the southern margin of the historical range for the Mohave ground squirrel. There are several MGS records in the California Natural Diversity Database (CNDDB) in the project vicinity. These are as follows:

- 6.2 miles north, 4 miles W Hesperia, near Mountain View. One male captured on July 1, 1977. This site is 1.45 miles N of the project site.
- 1.5 miles SSW Duncan Corners, Sunset Ridge. One juvenile captured on July 13, 2005. This site is 1.3 miles N of the project site.
- Hesperia (exact location uncertain). One individual was collected on March 9, 1921. This site is approximately 3.3 miles SE of the project site.
- Victorville. One individual collected on March 2, 1919. This site is 7.6 miles NNE of the project site.
- 3.2 miles NW Adelanto Post Office. One juvenile captured on June 24, 2011. This site is 5.3miles NW of the project site.
- Victorville, near Adelanto Road, west of Mojave Heights. Two individuals detected on June 3, 1980. This site is 9.5miles NNE of the project site.

Leitner (2012), in a review of the status of the MGS, examined the results of MGS trapping surveys throughout the species' range for the period 1998-2007. There have been a number of MGS surveys in the project vicinity. Two of these surveys, one carried out in 1977 and the other in 2005, yielded MGS captures in the project vicinity. These results are included in the CNDDB.

MGS Survey Results Trapping Dates, Grid Location, Weather, Capture Data are presented in Tables 4,5,6, 7, and 8.

Table 4. Trapping Dates MGS

Grid No.	First Session	Second Session	Third Session
1	**04/5 to 04/9 2022**	**05/23 to 05-27 2022**	**06/14 to 06/18 2022**

Table 5 MGS Grid Census Locations

Grid No. and Trapping Sessions 1-3	Grid Corners
Grid 1 – Three Sessions	SW 34 26 10.7 N 117 22 49.25 W NW 34 26 13.96 N 117 22 49.66 W NE 34 26 14.82 N 117 22 49.25 W SE 34 26 10.84 N 117 22 26.59 W

Center point of grid was 34 26 11.93 N and 117 22 37.97 W.

Table 6. Weather Summary

WEATHER CONDITIONS	Temp. Air Min F.	Temp. Air Max F.	Temp. Soil Min F.	Temp. Soil Max F.	Cloud Cover % AM	Cloud Cover % PM	Wind Min Mph	Wind Max Mph
Session 1								
April 5	**55**	**81**	**57**	**84**	**10**	**10**	**3**	**7**
April 6	**54**	**81**	**55**	**83**	**10**	**20**	**5**	**9**
April 7	**50**	**84**	**53**	**84**	**0**	**0**	**3**	**7**
April 8	**55**	**86**	**55**	**87**	**0**	**0**	**5**	**10**
April 9	**57**	**83**	**56**	**85**	**0**	**0**	**5**	**12**
Session 2								
May 23	**61**	**91**	**63**	**94**	**0**	**10**	**3**	**5**
May 24	**61**	**93**	**63**	**96**	**15**	**20**	**3**	**8**
May 25	**64**	**95**	**62**	**96**	**20**	**20**	**3**	**10**
May 26	**66**	**90**	**64**	**93**	**00**	**00**	**5**	**10**
May 27	**61**	**85**	**64**	**89**	**10**	**10**	**5**	**9**
Session 3								
June 14	**59**	**91**	**62**	**93**	**0**	**0**	**3**	**9**
June 15	**63**	**97**	**64**	**99**	**5**	**10**	**5**	**10**
June 16	**68**	**98**	**68**	**99**	**10**	**00**	**4**	**12**
June 17	**63**	**85**	**65**	**87**	**0**	**0**	**5**	**10**
June 18	**54**	**77**	**58**	**80**	**0**	**0**	**5**	**9**

AM and Min. Readings at 06:00
PM and Max Readings at 15:00

Table 7. MGS Live Tapping Data Summary

Category	Grid A Individuals (recaptures)	Total for Project Individuals
Trap Hours, Per Trap	178	178
Captures Totals All Species	18 (14)	18
MGS Captures	0	0
MGS Adult Male Captures	0	0
MGS Adult Female Captures	0	0
MGS Juvenile Male Captures	0	0
MGS Juvenile Female Captures	0	0
MGS Unknown Sex	0	0
AGS Captures	13(7)	5
AGS Adult Male Captures	5 (3)	2
AGS Adult Female Captures	7 (4)	3
AGS Juvenile Male Captures	0	0
AGS Juvenile Female Captures	1 (0)	1
AGS Unknown Sex	0	0
Number Of Species Captured	2	2

The California ground squirrel (*Spermophilus beecheyi)* was also captured (2 Adults and 3 juveniles).

Table 8. Sensitive Animals and Habitat on Palmetto Site

REPTILES				
Desert tortoise *Gopherus agassizii*	Historically found throughout the Mojave and Sonoran Deserts into Arizona, Nevada, and Utah. Occurs throughout the Mojave Desert in scattered populations. Found in creosote bush scrub, saltbush scrub, thornscrub (in Mexico), and Joshua tree woodland. Found in the open desert as well as in oases, riverbanks, washes, dunes, and occasionally rocky slopes.	February - June, all deserts Aug - Sep primarily eastern deserts. Can be present throughout year	FED: THR STATE: THR	Not present. Sign not observed on the property or zone of influence during the focused surveys.
BIRDS				
Northern harrier *Circus cyaneus*	Grassland and marshy habitats in Southern California. Uncommonly in open desert and brushlands.	Year round	FED: ND STATE: CSC	Low. Not observed during the surveys. Forages over a wide range of open habitat and can be expected to occur throughout most of Southern California. Although no

				nesting habitat was found, foraging habitat exists on site.
Sharp-shinned hawk *Accipiter striatus*	Nests in woodland, coniferous deciduous forest. Winter visitor and migrant to coastal Southern California. Forages over a variety of habitats.	Fall & winter; scarce in summers	FED: ND STATE: CSC	Low. Not observed during the surveys, but are expected to forage infrequently over the property during migration and in winter.
Cooper's hawk *Accipiter cooperi*	Woodland and semi-open habitats, riparian groves and mountain canyons. Uncommon permanent resident in coastal, mountains, and deserts of Southern California. Transients fairly common on coast in fall.	Year round; predominant in summer	FED: ND STATE: CSC	Low. Not observed during the surveys, but are expected to forage infrequently over the property during migration and in winter.
Ferruginous hawk *Buteo regalis*	Fairly common in winter in open grassland and agricultural regions in the interior, as well as some valleys along the coast. Rare and uncommon along the coast and in the desert.	Winter	FED: C2* STATE: CSC	Low. Not observed during the surveys. Poor quality foraging habitat for this species exists on site. No suitable nesting habitat occurs on site.
Prairie falcon *Falco mexicanus*	Nest in cliffs or rocky outcrops; forage in open arid valleys, agricultural fields. Throughout the desert and arid interior	Year round diurnal	FED: ND STATE: CSC	Low. Not observed during the surveys. Foraging habitat exists for this

	portions of coastal counties. Uncommon resident in Southern California.			species over the property, no suitable nesting habitat.
Burrowing owl *Athene cunicularia hypugea*	Grasslands and rangelands, usually occupying ground squirrel burrows. Resident over most of Southern California. Found in agricultural areas.	Year round	FED: ND STATE: CSC	Low. No burrows were observed on site, but this species may forage on site and nest in adjacent areas.
Le Conte's thrasher *Toxostoma lecontei*	Uncommon and local resident in low desert scrub throughout most of the Mojave Desert, extending up into the southwestern corner of the San Joaquin Valley. Breeding range extends from these areas into eastern Mojave, north into the Owens Valley and south into the lower Colorado Desert, and eastern Mojave. Also recorded from southern Nevada and Utah, as well as western Arizona and New Mexico.	Year round	FED: ND STATE: CSC	Moderate. This species may nest and forage on site. Was not observed during recent surveys.
Bendire's thrasher *Toxostoma bendirei*	Breeds in thorny shrubs and cactus in Joshua tree woodland with scattered desert shrubs such as creosote bush and burrobush primarily in eastern San Bernardino County. Also occur in the eastern Mojave in	Resident February - August	FED: ND STATE: CSC	Moderate. Not observed during the surveys; however, suitable breeding and foraging habitat

	areas with high numbers of *Opuntia*, or cholla, cactus. Common summer resident in Joshua Tree National Monument.			exist on the property.
Loggerhead shrike *Lanius ludovicianus*	Open fields with scattered trees, open woodland, scrub. Fairly common resident throughout southern California.	Year round	FED: ND STATE: CSC	Present. No nests observed. This species may nest in Joshua trees, and forage on site.
MAMMALS				
California leaf-nosed bat *Macrotus californicus*	In California, these bats primarily occupy low-lying desert areas, where they roost in caves, mines, and old buildings. Historic records extend west to near Chatsworth, Los Angeles County, but most populations from the California coastal basins are believed to have disappeared. Occurs from northern Nevada, Southern California, and western Arizona south to southern Baja California and Sonora.	Year round nocturnal	FED: ND STATE: CSC	Low. Because there are no suitable roost sites in the property limits this species does not roost on the property. However, it may forage over the property if there are roosting sites nearby.
Spotted bat *Euderma maculatum*	Found in the western North America from southern British Columbia to the Mexican border, at a small number of widely	Spring, Summer, Fall Nocturnal	FED: ND STATE: CSC	Low. Because there are no suitable roost sites in the property limits, this species does

	scattered localities. Habitats range from arid deserts and grasslands through mixed conifer forest up to 10,600 foot elevation. Prefers rock crevices in cliffs, also uses caves and buildings.	Hibernates in Winters		not roost on the property. However, it may forage over the property if there are roosting sites such as caves in the nearby mountains.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Variety of habitats including herbaceous and desert scrub areas, early stages of open forest and chaparral. Most common in relatively open habitats. Restricted to the cismontane areas of Southern California, extending from the coast to the Santa Monica, San Gabriel, San Bernardino and Santa Rosa mountain ranges.	Year round, diurnal and Crepuscular activity	FED: ND STATE: CSC	Present. Jackrabbits were observed during the field surveys, but the geographic location of the property indicates that the individuals observed belonged to the desert race, and not the coastal race.
Mohave ground squirrel *Spermophilus mohavensis*	Creosote bush scrub, saltbush scrub and Joshua tree woodland. This species is found in the open desert, at oases, along riverbanks, and washes, in dunes and on rocky slopes. Its known habitat extends from San Bernardino north to Kern and Inyo counties.	Active in spring	FED: ND STATE: THR	Not present per focused survey. Low quality habitat occurs on site
Grasshopper mouse	In the more arid regions of southern California. Especially prefers sandy	Year round	FED: ND STATE: CSC	Moderate probability.

Onychomys torridus ramona	areas of the Mojave, Sonoran deserts.			
SENSITIVE HABITATS				
Joshua tree woodland	Most of the Mojave Desert and parts of the Colorado Desert.	Year round	Protected by local ordinance	A Joshua tree woodland does not occur on site, but individual Joshua trees are scattered and present over the site. Survey and mapping performed.
Jurisdictional Drainages and Vernal Pools				
Drainages			Protected by Federal, State, and local ordinance	There are no jurisdictional drainages on site*
Vernal Pools			Protected by Federal, State, and local ordinance	There are no vernal pools nor suitable soils on site for vernal pools to occur.

*• **Site:** Does not have a USGS delineated “Blue Line Stream”.

- **100-Year-Flood Plain Designation:** The Site is not within a "Designated Flood Plain".
- **Dominate Upstream Desert Alluvial Fan Channel:** The Site does not have a "Dominate upstream desert alluvial fan channel" that has become undefined due to lower slope and braiding of typical desert type alluvial fan morphology, therefore no potentially significant upstream off-site concentrated or sheet flows are formed from an alluvial fan that would be of an issue impacting the Site.
- **Ephemeral Natural Drainage Course(s):** The Site does not have any "Significant Native or Altered Ephemeral” drainage course(s) bisecting the Site. The City of Palmdale (Upstream Development or Road improvements) typically concentrates the flows of these natural "Ephemeral Drainage Courses”.

Legend

FEDERAL*:* Federal Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
PE	Taxa proposed to be listed as endangered
PT	Taxa proposed to be listed as threatened
C2*	The U.S. Fish and Wildlife Service (USFWS) revised its classifications of candidate taxa (species, subspecies, and other taxonomic designations). The former designation of "Category 2 Candidate for listing" has been discontinued. The USFWS will continue to assess the need for protection of these taxa and may, in the future, designate such taxa as Candidates. NRA, Inc. has noted the change in species status by marking with an asterisk (*) those C2 candidates that were removed from the list.
C	Candidate for listing. Refers to taxa for which the USFWS has sufficient information to support a proposal to list as Endangered or Threatened and issuance of the proposal is anticipated but precluded at this time.
ND	Not designated as a sensitive species

STATE: State Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
CE	Candidate for endangered listing
CT	Candidate for threatened listing
CFP	California Fully Protected. Species legally protected under special legislation enacted prior to the California Endangered Species Act.
CSC	California Species of Special Concern. Taxa with populations declining seriously or that are otherwise highly vulnerable to human development.
SA	Special Animal. Taxa of concern to the California Natural Diversity Data Base regardless of their current legal or protected status.
ND	Not designated as a sensitive species

CNPS: California Native Plant Society Classifications

1A	Plants presumed by CNPS to be extinct in California
1B	Plants considered by CNPS to be rare or endangered in California and elsewhere
2	Plants considered by CNPS to be rare, threatened or endangered in California, but which are more common elsewhere
3	Review list of plants suggested by CNPS for consideration as endangered but about which more information is needed.
4	Watch list of plants of limited distribution whose status should be monitored.

Occurrence Probabilities

Occurs	Observed on the site during this study or recorded on site by other qualified biologists
Expected	Not observed or recorded on site, but likely to be present at least during a portion of the year
High	Known to occur in the vicinity of the project site. Suitable habitat exists on site.
Moderate	Known to occur in the vicinity of the project site. Small areas of or marginally suitable habitat exists on site.
Low	No reported sightings within the vicinity of the project. Available habitat limited and rarely used.
None	Focused surveys did not locate the species, or suitable habitat does not exist on site.
Unknown	No data is available on whether species is on or in the vicinity of the site, and information about the species is insufficient to make an accurate assessment of probability occurrence.

7.0 IMPACTS AND RECOMMENDATIONS

The MGS was not captured on the current project site during the 2022 protocol survey as described in this report.

No sign of desert tortoise was observed during the 100 percent coverage of the site or the ZOI surveys. The desert tortoise is not present within the proposed project footprint nor the zone of influence.

No rare plants were documented on site.

The Project Site does not currently support MGS, desert tortoise, nor rare plants.

Implementation of the Project will not result in the loss of individual MGS, nor will it adversely affect local or regional MGS populations; it will not result in the take of DT nor in impacts to occupied habitat; no rare plants were documented on site and no take will occur.

There are no blue line streams on site. There are no jurisdictional drainages on site. There are no vernal pools nor suitable soils for vernal pools on site.

8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached figures present the data and information required for this resource assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this investigation was performed by me. I certify that I have not signed a nondisclosure or consultant confidentiality agreement nor do I have any financial interest in the Project.

DATE: September 9, 2022 SIGNED: Philippe Jean Vergne

Report Author Philippe Vergne

9.0 REFERENCES

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Vergne P. Focused Survey for Mohave Ground Squirrel Amethyst Basin 2017 for Kidd Biological Consulting

Vergne P. Phase One Habitat Survey for Mohave Ground Squirrel US Cold Storage 2020

Appendix A Mohave Ground Squirrel (MGS) Trapping Summary Form

Mohave Ground Squirrel (MGS) Survey and Trapping Form

Part I – PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: Palmetto Way Warehouse___` Property Owner: NA

Location: Township 4N___; Range 5W_; Section 14 ; ¼ Section NE 1/4 _SE 1/4

Quad map/series: Baldy Mesa_ UTM coordinates **Center of grid 34 26 11.93 N and 117 22 37.97 W**

GPS coordinates of trapping grid corners:

MGS Grid Census Locations

Grid No. and Trapping Sessions 1-3	Grid Corners
Grid 1 – Three Sessions	SW 34 26 10.7 N 117 22 49.25 W NW 34 26 13.96 N 117 22 49.66 W NE 34 26 14.82 N 117 22 49.25 W SE 34 26 10.84 N 117 22 26.59 W

Acreage of Project Site: 30.52 acres ___ Acreage of potential MGS habitat on site 30.52 acres_

Total acreage visually surveyed on project site: 30.52 acres

Visual surveys conducted by: Philippe Vergne of ENVIRA

Total acres trapped: 26 acres

Number of sampling grids: 1

Trapping conducted by:_____Philippe Vergne of ENVIRA___

Dates of sampling term(s): (all 2022)
FIRST April 5-9, SECOND _May 23 to 27 THIRD June 14 to 18
Site Elevation 3,220

Weather Summary

WEATHER CONDITIONS	Temp. Air Min F.	Temp. Air Max F.	Temp. Soil Min F.	Temp. Soil Max F.	Cloud Cover % AM	Cloud Cover % PM	Wind Min Mph	Wind Max Mph
Session 1								
April 5	**55**	**81**	**57**	**84**	**10**	**10**	**3**	**7**
April 6	**54**	**81**	**55**	**83**	**10**	**20**	**5**	**9**
April 7	**50**	**84**	**53**	**84**	**0**	**0**	**3**	**7**
April 8	**55**	**86**	**55**	**87**	**0**	**0**	**5**	**10**
April 9	**57**	**83**	**56**	**85**	**0**	**0**	**5**	**12**
Session 2								
May 23	**61**	**91**	**63**	**94**	**0**	**10**	**3**	**5**
May 24	**61**	**93**	**63**	**96**	**15**	**20**	**3**	**8**
May 25	**64**	**95**	**62**	**96**	**20**	**20**	**3**	**10**
May 26	**66**	**90**	**64**	**93**	**00**	**00**	**5**	**10**
May 27	**61**	**85**	**64**	**89**	**10**	**10**	**5**	**9**
Session 3								
June 14	**59**	**91**	**62**	**93**	**0**	**0**	**3**	**9**
June 15	**63**	**97**	**64**	**99**	**5**	**10**	**5**	**10**
June 16	**68**	**98**	**68**	**99**	**10**	**00**	**4**	**12**
June 17	**63**	**85**	**65**	**87**	**0**	**0**	**5**	**10**
June 18	**54**	**77**	**58**	**80**	**0**	**0**	**5**	**9**

AM and Min. Readings at 06:00
PM and Max Readings at 15:00
Live Tapping Data Summary

MGS were not detected in the Project Site or within any census grids during any of the three live trapping sessions. Only the AGS and California Ground squirrel were trapped within the grid.

Total trap hours were in excess of 172 hours, averaging approximately 11.5 hours per day or 57.5 hours per live trapping event. There were no MGS captures. AGS capture totals were low at 17 representing 8 individuals.

Part II – GENERAL HABITAT DESCRIPTION

The disturbed annual grasslands and understory on site are dominated by fiddleneck, brome, and forbs. Joshua Tree are scattered throughout the site. Scrub community is dominated by Saltbush, California Juniper, and isolated creosote bush

Site Vegetation

Common name	Scientific name
California juniper	*Juniperus californica*
Burro Bush or white bur sage	*Ambrosia dumosa*
Desert sunflower	*Geraea canescens*
Fremont pincushion	*Chaenactis fremontii*
Cheese bush	*Hymenoclea salsola*
Antelope bush	*Purshia tritendata*
Flat-topped buckwheat	*Eriogonum plumatella*
California buckwheat	*Eriogonum fasciculatum*
Great Basin sagebrush	*Artemisia tritendata*
Coopers box-thorn	*Lycium cooperi*
Desert sage	*Salvia dorii*
Woody bottle washer	*Camissonia boothii*
Plantain	*Plantago insularis*
Cotton thorn	*Tetradymia axillaris*
Creosote bush	*Larrea tridentata*
Hop sage	*Grayia sinosa*
Snakeweed	*Gutierrezia microcephala*
Rabbit brush	*Chrysothamnus nauseosus*
Nevada ephedra	*Ephreda nevadensis*
Joshua tree	*Yucca brevifolia*

Common name	Scientific name
Red brome	*Bromus madritensis*
Cheat grass	*Bromus tectorum*
Perennial bluegrass	*Poa secunda*
Meditarrean grass	*Schismus barbatus*
Red stemmed filaree	*Erodium cicutarium*

Land form (mesa, bajada, wash): Mesa adjacent to commercial warehouses and rural housing. The project site is an undeveloped portion north of Palmetto Way, to the West of Amargosa Road (adjacent to the 15 Freeway). The valley floor is almost flat (approximately 1.25% slope to the southeast).

Soils description: The soils on the site are Cajon sands, and Hesperia loamy fine sands

Elevation: 3,443 to 3,468 Slope: estimated 1.25% slope to southeast

Appendix B MOU

—

State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Wildlife Branch
1812 9th Street
Sacramento, CA 95811
http://www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

Expiration Date: December 31, 2021

MEMORANDUM OF UNDERSTANDING

Philippe J. Vergne (SC-002835)
Principal Investigator
ENVIRA

Research on Mohave Ground Squirrel in California

May 7, 2018
(This supersedes the MOU issued on September 26, 2012)

This Memorandum of Understanding (MOU) is issued pursuant to California Code of Regulations Title 14 Section 783.1(a), and Fish and Game Code (FGC) Section 2081(a) of the California Endangered Species Act (CESA) whereby through permits or memorandums of understanding, the Department of Fish and Wildlife (Department) may authorize individuals, public agencies, universities, zoological gardens, and scientific or educational institutions, to import, export, take, or possess any endangered species, threatened species, or candidate species for scientific, educational, or management purposes.

This MOU is a legal instrument connected to your Scientific Collecting Permit (**SCP; SC-002835**) pursuant to Fish and Game Code Section 1002 and CCR Title 14 Section 650, referenced herein for the purpose of linking the two regulatory documents and all authorized research activities.

MOUs issued pursuant to Fish and Game Code 2081(a) generally do not cover "movement out of harm's way" during project activities (as defined in Public Resources Code 21065) unless part of the project's purpose is to contribute to recovery of the species. Incidental take, as well as movement out of harm's way to avoid lethal take, of CESA-listed or fully protected species associated with project activities is typically authorized by the Department Regional Office with jurisdiction over the project site through separate permits issued pursuant to other Fish and Game Code sections such as 2081(b) or 2835.

Authorized Species and Research Activities

The Department authorizes you to conduct the following scientific research methods and activities on the CESA-listed threatened Mohave ground squirrel (*Xerospermophilus mohavensis;* squirrel):

a) search (survey) for, including the capture using live-traps;

Renewed October 2021.

Appendix C1 – 2025 Biological Resources Assessment

November 3, 2025

Danielle Ornelas, M.S.
Senior Environmental Planner
CASC Engineering & Consulting
27710 Jefferson Avenue, Suite 105
Temecula, CA
Via email: dornelas@cascinc.com

Subject: Biological Resources Habitat Assessment Report for the Amargosa Road & Palmetto Way Spec. Industrial Project, City of Hesperia, San Bernardino County, California (APN #: 0405-072- [52, 53, 55])

Dear Ms. Ornelas,

This Biological Resources Habitat Assessment Report has been prepared by Osprey Environmental Associates, Inc. (OSPREY) to evaluate the potential for the Amargosa Road & Palmetto Way Speculative Industrial Project (Project) site to support sensitive biological resources, including special-status plant and wildlife species, sensitive vegetation communities, and jurisdictional aquatic features.

The primary objective of this report is to identify biological constraints that may influence Project design, permitting, and compliance with the California Environmental Quality Act (CEQA), and to determine whether focused species surveys or additional technical studies are warranted to support environmental review and regulatory coordination. Report Figures are included in Attachment A of this report.

PROJECT LOCATION AND DESCRIPTION

The Project is located within the City of Hesperia, San Bernardino County, California, and encompasses approximately 30.52 acres across three parcels (APNs 0405-072-52, -53, and -55). The Project site is bounded by Avenal Street to the north and west, Palmetto Way to the south, and Amargosa Road to the east, within the USGS 7.5-minute Baldy Mesa SE Quadrangle, Township 4 North, Range 5 West (latitude 34.4366696° N, longitude 117.3777327° W).

The Project, proposed by Rachamim 5, LLC, involves the construction of a 499,850-square-foot industrial warehouse building, including approximately 10,000 square feet of office space, with associated site improvements such as loading docks, tractor-trailer and passenger vehicle parking, landscaped areas, and stormwater detention basins. Three driveway entrances along Palmetto Way would provide access for both truck and passenger vehicle circulation. In total, the Project would accommodate 72 loading docks, 256 tractor-trailer stalls, and 251 passenger vehicle parking spaces.

Infrastructure improvements would include extension and installation of new dry and wet utilities, including domestic water, sanitary sewer, and electrical service, as well as at-grade and

underground stormwater detention and infiltration basins designed to manage runoff and ensure compliance with water quality standards.

METHODS

Literature Review

Prior to conducting field surveys, OSPREY performed a comprehensive literature review and records search covering a USGS nine-quadrangle area that includes the Baldy Mesa, Hesperia, Shadow Mountain SE, Adelanto, Victorville, Phelan, Telegraph Peak, Cajon, and Silverwood Lake quadrangles.

The literature review included queries of the following data sources:

- CASC Biological Resources Assessment Report (CASC 2022)
- California Department of Fish and Wildlife (CDFW) Biogeographic Information and Observation System (BIOS) (CDFW 2025A)
- CDFW California Natural Diversity Database (CNDDB) (CDFW 2025B)
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2025)
- U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper, National Wetland Inventory (NWI) Mapper (USFWS 2025)
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2025)
- Recent and historical aerial imagery (Google Earth 2025)

Field Survey

A reconnaissance-level biological field survey was conducted by an OSPREY biologist on October 29, 2025. The survey was conducted on foot and encompassed the entire Project footprint where accessible. Survey methods emphasized detection of sensitive biological resources, particularly potential habitat for species identified during the literature review.

Vegetation classification followed *A Manual of California Vegetation* (Sawyer et al. 2009), cross-referenced with *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). Plant taxonomy followed *The Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al. 2012).

Wildlife nomenclature followed the *Checklist of North American Birds* (Chesser et al. 2020), *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico* (Crother 2012), and the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014).

EXISTING CONDITIONS

Topography, Soils, and Hydrology

Topography is generally flat, with elevations ranging from approximately 3,443 to 3,468 feet above mean sea level (AMSL). According to NRCS (NRCS 2025), soils mapped within the Project site include:

- Cajon Sand, 0 to 2 Percent Slopes

No perennial or ephemeral drainages were observed in the Project site, or database query. The nearest water features, Oro Grande Wash (west) and the California Aqueduct (south), are located well outside the Project site.

Vegetation Communities and Land Cover Types

The Project site supports two vegetation communities and one land cover type as described below.

Mexican Bladdersage Scrub

The Mexican bladdersage scrub community is dominated by Mexican bladdersage (*Scutellaria mexicana*), which comprises greater than 50 percent relative cover in the shrub layer. Associated species include white bursage (*Ambrosia dumosa*), rubber rabbitbrush (*Ericameria nauseosa*), California buckwheat (*Eriogonum fasciculatum*), and California jointfir (*Ephedra californica*), with a sparse to patchy herbaceous layer composed primarily of *Bromus* spp., *Schismus* sp., and *Erodium* sp. Occasional California juniper (*Juniperus californica*) and Western Joshua tree (*Yucca brevifolia*) occur interspersed throughout this community.

California Jointfir Scrub

The California jointfir scrub community is dominated by California jointfir (*Ephedra californica*), which exhibits more than 2 percent absolute cover in the shrub layer. Subdominant species include white bursage, Mexican bladdersage, California buckwheat, and a similar mosaic of non-native annual herbs such as *Bromus* spp., *Schismus* sp., and *Erodium* sp. Scattered California juniper and Western Joshua tree are also present within this community.

Disturbed Habitat

Areas mapped as disturbed habitat have been subject to substantial mechanical disturbance and off-road vehicle activity, resulting in partial vegetation removal and soil compaction while retaining an earthen substrate. These areas support sparse remnant vegetation composed primarily of ruderal annuals and occasional desert scrub species, reflecting low habitat quality and limited ecological function relative to the surrounding native communities.

Wildlife Observations

Wildlife species observed during the reconnaissance survey included red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), California quail (*Callipepla californica*), common

raven (*Corvus corax*), and black-tailed jackrabbit (*Lepus californicus*). No special-status wildlife species were detected during the reconnaissance survey.

BIOLOGICAL CONSTRAINTS

Special-Status Species

For the purposes of this report, special-status species are defined as plant and wildlife species that are listed, proposed for listing, or candidates for listing as threatened or endangered under the Federal Endangered Species Act (FESA), as administered by the USFWS or National Marine Fisheries Service (NMFS); species listed or candidates for listing as rare, threatened, or endangered under the California Endangered Species Act (CESA), as administered by the CDFW; wildlife species designated by CDFW as Species of Special Concern (SSC) or Fully Protected under the California Fish and Game Code (CFGC); and plant species assigned a California Rare Plant Rank (CRPR) of 1B, 2, 3, or 4 by the CNPS.

Special-Status Plant Species

Based on the results of the literature review and field assessment, one special-status tree species, the Western Joshua tree, was observed within the Project site. Additionally, 14 special-status plant species were determined to have a low to moderate potential to occur within the Project site. These species include *Asclepias nyctaginifolia* (Mojave milkweed), *Canbya candida* (white pygmy-poppy), *Castilleja plagiotoma* (Mojave paintbrush), *Chorizanthe spinosa* (Mojave spineflower), *Chorizanthe xanti var. leucotheca* (white-bracted spineflower), *Diplacus mohavensis* (Mojave monkeyflower), *Eremothera boothii ssp. boothii* (Booth's evening-primrose), *Loeflingia squarrosa var. artemisiarum* (sagebrush loeflingia), *Monardella exilis* (Mojave monardella), *Muilla coronata* (crowned muilla), *Opuntia basilaris var. brachyclada* (short-joint beavertail), *Pediomelum castoreum* (Beaver Dam breadroot), *Sclerocactus polyancistrus* (Mojave fish hook cactus), and *Syntrichopappus lemmonii* (Lemmon's syntrichopappus).

Special-Status Wildlife Species

Based on the results of the literature review and field assessment, eight special-status wildlife species were determined to have a low to moderate potential to occur within the Project site. These species include *Athene cunicularia* (burrowing owl), *Lanius ludovicianus* (loggerhead shrike), *Toxostoma lecontei* (Le Conte's thrasher), *Bombus crotchii* (Crotch's bumble bee), *Corynorhinus townsendii* (Townsend's big-eared bat), *Xerospermophilus mohavensis* (Mohave ground squirrel), *Aspidoscelis tigris stejnegeri* (coastal whiptail), and *Gopherus agassizii* (desert tortoise).

Sensitive Vegetation Communities and Critical Habitat

Plant communities are considered sensitive biological resources when they have limited distributions, provide high wildlife habitat value, support special-status species, or are particularly vulnerable to disturbance or degradation. CDFW classifies such communities as "threatened" or "very threatened" and tracks their occurrences in the California Natural Diversity Database (CNDDB).

Under NatureServe's (2010) ranking system, vegetation alliances are assigned global (G) and state (S) ranks ranging from 1 (critically imperiled) to 5 (secure). Alliances ranked G1–G3 or S1–S3 are considered sensitive, and certain G4–G5 alliances are also recognized as sensitive under CDFW's revised 2020 natural community ranking methodology.

Critical habitat, as designated by the USFWS under the FESA, refers to specific geographic areas that contain physical or biological features essential to the conservation of a threatened or endangered species and that may require special management or protection. Critical habitat designations identify areas necessary for a species' recovery, including those that provide key resources such as breeding, feeding, sheltering, migration, or dispersal habitat.

No sensitive vegetation communities occur on the Project site. No USFWS designated critical habitat, either proposed or finalized, occurs within the Project site; therefore, Project implementation will not result in impacts to any designated critical habitat.

DISCUSSION AND RECOMMENDATIONS

The literature review and field assessment identified several special-status biological resources that may constrain Project implementation. These include special-status plant and wildlife species, including the Western Joshua tree.

Special-Status Plant Species

Fourteen (14) special-status plant species were identified as having a low to moderate potential to occur within the Project site based on regional occurrence records and the presence of suitable Mojave Desert scrub habitat.

Although a focused rare plant survey conducted in 2022 by CASC (CASC 2022) did not detect any special-status plant species, the survey results are considered outdated and environmental conditions, including rainfall, temperature patterns, and site disturbance, may have changed since that time. To maintain compliance and regulatory defensibility and avoid potential delays in Project review, or permitting, by CDFW and the USFWS, it is recommended that updated rare plant surveys be conducted during the 2026 blooming season (March- July).

Recommended Action

- Conduct focused botanical surveys during the appropriate blooming period (March–July) in accordance with *CDFW (2018) Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*.
- Document and map any special-status plant species occurrences and, if detected, coordinate with CDFW to develop appropriate avoidance or mitigation measures consistent with current regulatory guidance.

Western Joshua Tree

The Western Joshua tree is protected under the Western Joshua Tree Conservation Act (WJTCA) and managed through the Western Joshua Tree Conservation Plan (WJTCP) administered by the CDFW. Any activity that may remove, trim, relocate, or otherwise impact Joshua trees or their root systems requires prior authorization from CDFW.

Although a Western Joshua tree census was conducted in 2022 by CASC (CASC 2022), the data are now outdated, as the number, size, and condition of the trees on-site may have changed since the time of the census survey. To ensure regulatory defensibility and avoid potential delays in Project review or permitting by the CDFW, an updated Joshua tree inventory should be completed prior to Project approval or ground disturbance.

Recommended Action

- Complete a comprehensive Joshua tree inventory prior to any ground disturbance.
- Coordinate with CDFW to determine the appropriate permitting pathway (avoidance, local program, or Incidental Take Authorization [ITA]).
- Implement avoidance and protective buffers wherever feasible.
- If removal or disturbance is unavoidable, obtain a CDFW-issued ITA and implement required mitigation (e.g., payment of mitigation fees or participation in approved conservation programs).

Special-Status Wildlife Species

Eight special-status wildlife species were determined to have a low to moderate potential to occur within the Project site, including burrowing owl, loggerhead shrike, Le Conte's thrasher, Crotch's bumble bee, Townsend's big-eared bat, Mohave ground squirrel, coastal whiptail, and desert tortoise.

Although focused species surveys were conducted in 2022 by CASC (CASC 2022) for burrowing owl, desert tortoise, and Mohave ground squirrel, the results are considered outdated due to the time elapsed since the surveys were completed and the continued presence of suitable habitat within the Project site. To ensure the survey data remains current, defensible, and compliant with agency standards, it is recommended that updated focused surveys be conducted prior to Project implementation. Under current CDFW and USFWS guidance, focused surveys for special-status wildlife species are generally considered valid for one year from the date of completion, or until the onset of the next appropriate survey season for the species in question.

Recommended Action

Conduct focused surveys for special-status wildlife species with potential to occur within the Project site, in accordance with the most current CDFW and USFWS-approved survey protocols and within the appropriate seasonal survey windows, as summarized below.

- **Burrowing Owl** – Conduct focused surveys in accordance with the *CDFW (2012) Staff Report on Burrowing Owl Mitigation* during the 2026 survey window (February 15–August 31).

- **Crotch's Bumble Bee**– Conduct focused surveys following *CDFW (2023) Survey Considerations for CESA Candidate Bumble Bee Species* during the 2026 survey window (April–August).
- **Desert Tortoise** – Conduct presence/absence surveys following the *USFWS (2019) PREPARING FOR ANY ACTION THAT MAY OCCUR WITHIN THE RANGE OF THE MOJAVE DESERT TORTOISE (Gopherus agassizii)* survey protocol. Because the Project qualifies as a small project, surveys may be conducted year-round, provided conditions allow adequate detection of tortoise sign.
- **Mohave Ground Squirrel**– Conduct protocol-level trapping surveys consistent with the *CDFG (2003, or as updated) Mohave Ground Squirrel Survey Guidelines* during the 2026 survey window (March 15–July 15).
- **Townsend's Big-Eared Bat and Nesting Birds** – Conduct preconstruction roost and nesting bird surveys in accordance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, and 3513, within 72 hours prior to vegetation removal or ground disturbance, during the avian breeding season (March 1–August 31).

CONCLUSION

As described above, this report identifies sensitive biological resources and evaluates the potential occurrence of special-status species that may pose constraints to development of the proposed Project. Additional focused surveys, regulatory coordination, and technical studies are required to ensure full compliance with applicable state and federal laws, including the FESA, CESA, and relevant provisions of the California Fish and Game Code (CFGC). These subsequent efforts will confirm species presence or absence, refine impact assessments, and identify avoidance, minimization, and mitigation measures necessary to reduce potential biological impacts to less-than-significant levels under CEQA.

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Appendix D – Cultural and Paleontological Resources Assessment

DUKE CRM

18 Technology Dr., Ste. 103
Irvine, CA 92618
949-356-6660
www.dukecrm.com

September 23, 2022

Anthony DeLuca
CASC Engineering & Consulting
1470 E. Cooley Drive
Colton, CA 92324

Subject: Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project, City of Hesperia, San Bernardino County, California (DUKE Project Number C-0413)

Dear Mr. DeLuca:

At the request of the CASC Engineering & Consulting (CLIENT), Duke Cultural Resources Management, LLC (DUKE CRM) has prepared a cultural and paleontological resources assessment for the Palmetto Way Industrial Building Project (Project), located in the City of Hesperia, San Bernardino County, California. The Project is 34 acres in size. The City of Hesperia is the lead agency for California Environmental Quality Act (CEQA).

The Project is located in the High Desert within APNs 0405-072-52, 53, 54, and 55 in Section 14, Township 4 North, Range 5 West, as shown on the USGS *Baldy Mesa, & Hesperia, Calif.* 7.5-minute quadrangle map (see Attachment 1 for Project Maps). The Project will construct a 498,500 square foot Industrial Warehouse Building with up to 25,000 square feet of office space. The proposed Project will include 76 loading dock doors, 182 truck/trailer parking spaces and 281 auto parking spaces on four (4) parcels. Maximum depth of excavation of approximately eight (8) to 10 feet.

This report includes the result of our research and field survey for cultural and paleontological resources.

Research

On May 18, 2022, DUKE CRM submitted a request for a records search by the South Central Coastal Information Center (SCCIC) for the Project. The SCCIC located at the California State University, Fullerton is part of the California Historical Resources Information System. However, due to a SCCIC backlog, the records search was performed by DUKE CRM staff archaeologist Morgan Bender on September 12, 2022. It included a review of all recorded cultural resources within a ½-mile radius of the Project, as well as a review of known cultural resource survey and excavation reports.

The records search identified three (3) cultural resources within ½ mile of the Project, none of which are located within the current Project area. Resource P-36-0021351 is the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR)-eligible California Aqueduct located 670 feet from the southwest corner of the Project. Resource P-36-021288, located 2400 feet northeast of the Project area, is a mid-20th century trash deposit consisting primarily of cans; CRHR eligibility has not been determined. P-36-021366 is a mid-20th century trash scatter. CRHR eligibility has not been determined.

The SCCIC identified seven (7) cultural reports within ½ mile of the Project, three (3) of which overlap with the Project area (Table 1). No resources were identified within the Project area by any of these previous investigations.

Table 1. Reports within the Project Boundary

Report No.	Year	Report Title	Author(s)
SB-04975	2005	Historical/Archaeological Resources Survey Report: Baldy Mesa Water District Arsenic Treatment Project, Cities of Victorville and Hesperia, San Bernardino County, California.	Matthew Wetherbee
SB-06859	2010	Identification and Evaluation of Historic Properties: Town of Apple Valley and City of Hesperia Wastewater Reclamation Plants and Related Facilities Project, Victor Valley Area, San Bernardino County, California.	Tang, Bai "Tom", Terri Jacquemain, Daniel Ballester, and Harry Quinn
SB-07494	2013	G.O. 131-D Victor-Aqueduct-Phelan 115kV Replacement Project.	Clark, Fatima V. and Dave Hanna

Additionally, an inquiry to the Native American Heritage Commission (NAHC) was submitted to ascertain the presence of known sacred sites, Native American cultural resources, and/or Native American human remains within the boundaries of the proposed Project. On June 21, 2022, the NAHC the Sacred Lands File indicated Native American cultural resources have been identified within the general vicinity of the Project location (see Attachment 2).

DUKE CRM conducted a review of online historical aerial photographs and historical USGS quad maps utilizing University of California, Santa Barbara FrameFinder, historicaerials.com, and USGS Historical Topographic Map Explorer. The Hesperia 1:62,500 scale map from 1902 does not show any trails, roads, buildings or structures within the Project area. By 1942, a few trails are located in the vicinity of the Project area but not within its boundaries (Hesperia 1:62,500 1942). The predecessor to U.S. 395/I-15 has been constructed by 1942, as are several power transmission lines. A basic network of roads is visible on the 1956 Baldy Mesa 1:24,000 quadrangle; they are a mix of maintained and unmaintained dirt roads. Additional roads were noted on the 1968 Baldy Mesa & Hesperia 1:24,000 maps, but the Project area remains undeveloped. The California Aqueduct is illustrated on the 1980 Baldy Mesa & Hesperia 1:24,000 maps to the south and west of the Project area.

Aerial imagery analysis verifies the map analysis (UCSB Framefinder 2022, HistoricAerials.com 2022). A 1952 aerial image illustrates minor road developments connecting sparsely distributed homesteads with the predecessor of U.S. 395/I-15 as a two-lane road. By 1968, the highway is well developed with off- and on-ramps. The road network around the Project area is well developed by 1986. The property to the south of the Project area is developed between 1995 and 2002. No development of the Project area is noted through 2018.

The geology in the vicinity of the Project has been mapped by Dibblee and Minch (2008). A review of this map indicates the proposed Project is located on primarily alluvial gravel from the Pleistocene period (*Qa*).

DUKE CRM requested that the Western Science Center (WSC) perform a paleontological records search for known fossil localities within, and in the vicinity of, the Project. On May 27, 2022, the WSC found that there have been no paleontological resources discovered within the Project area or within a one (1) mile search radius. But significant fossils have been discovered in similar sediments in other areas of southern California. The WSC recommends a paleontological mitigation program. The WSC classifies these deposits as having high paleontological sensitivity.

Field Survey

Morgan Bender, M.A., RPA, Archaeologist and Zachary Duke, Archaeological Technician conducted an intensive pedestrian survey of the Project on July 27, 2022. The survey area included all 34 acres in the area of the proposed Project with the exception of fenced 2.3 acre existing facility in the northwest corner. Transects

were spaced no more than 15 meters apart. The surface visibility was good, ranging from 90-100 percent. The area has little to no vegetation and scattered debris with a mean elevation of approximately 3,450 feet above mean sea level. A motocross track has been established on the eastern half of the Project area. See photographs in Attachment B. No cultural or paleontological resources were observed as a result of the field survey.

Conclusions

DUKE CRM assessed the proposed Project for impacts to cultural and paleontological resources according to CEQA. As a result of negative findings during the SCCIC records search and field survey, our assessment is that the Project has a low potential to impact cultural resources. Therefore, no further action is recommended with regards to cultural resources.

The Project is located on Pleistocene age (*Qa*) sediments. The Project is considered to have a high potential to impact paleontological resources. The WSC documents numerous fossil localities within similar deposits, but none noted within one (1) mile of the Project area. Research indicates that there is a high sensitivity for paleontological resources in the old alluvial deposits that underlie the Project. Therefore, significant and unique paleontological resources may be impacted by the project during earth disturbing activities in this area. These impacts would be considered potentially significant. In order to reduce the potential for impacts to paleontological resources to a level that is less than significant under CEQA, paleontological monitoring is recommended where ground disturbance exceeds four (4) feet below surface within the Project.

Paleontological Monitoring

A paleontological monitor shall be present during ground disturbing activities below four (4) feet in depth within the Project. The monitor shall work under the direct supervision of a qualified paleontologist (B.S./B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated competence in paleontological research, fieldwork, reporting, and curation).

1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
2. The paleontological monitor shall be present full-time during ground disturbance below 4 feet in depth within the Project, including but not limited to grading, trenching, utilities, and off-site easements. If, after excavation begins, the qualified paleontologist determines that the sediments are not likely to produce fossil resources, monitoring efforts shall be reduced.
3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered.
4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.
5. In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly mapped, documented, removed, and the area cleared.
6. If the discovery is significant the qualified paleontologist shall notify the CLIENT and CITY immediately.
7. In consultation with the CLIENT and CITY the qualified paleontologist shall develop a plan of mitigation which will likely include full-time monitoring, salvage excavation, scientific removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find. If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The

County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify the Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Thank you for contacting DUKECRM on this interesting project. If you have any questions or comments, you can contact me at (714) 345-9883, or by e-mail at BrianGlenn@dukecrm.com.

Sincerely,

DUKE CULTURAL RESOURCES MANAGEMENT, LLC



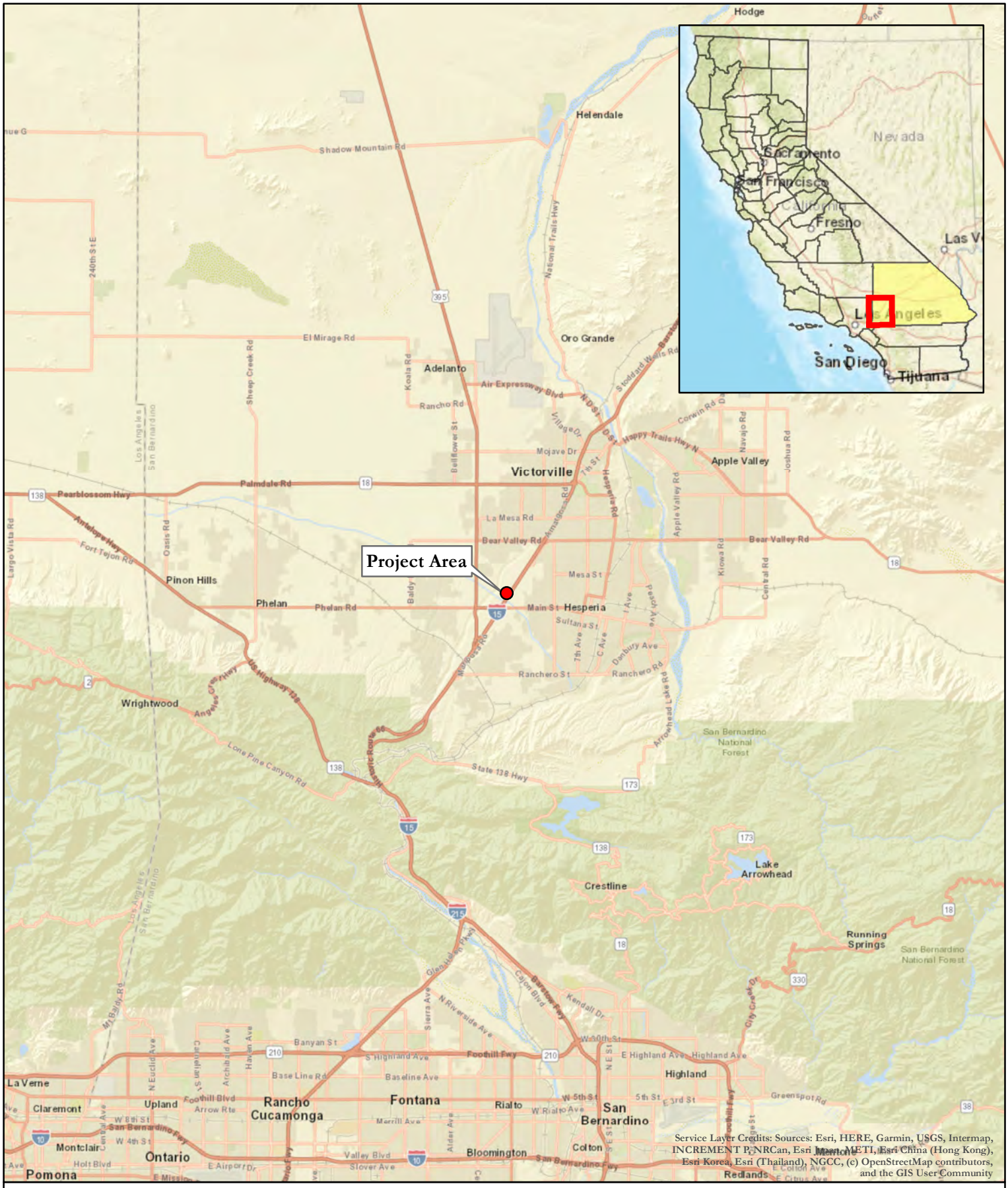
Brian Glenn, M.A., RPA
Archaeologist

Attachments

1: Project Maps
2: Native American Heritage Commission Letter
3: Project Photographs

ATTACHMENT 1

PROJECT MAPS



Map 1 - Project Vicinity

Palmetto Way Industrial Bldg, C-0413

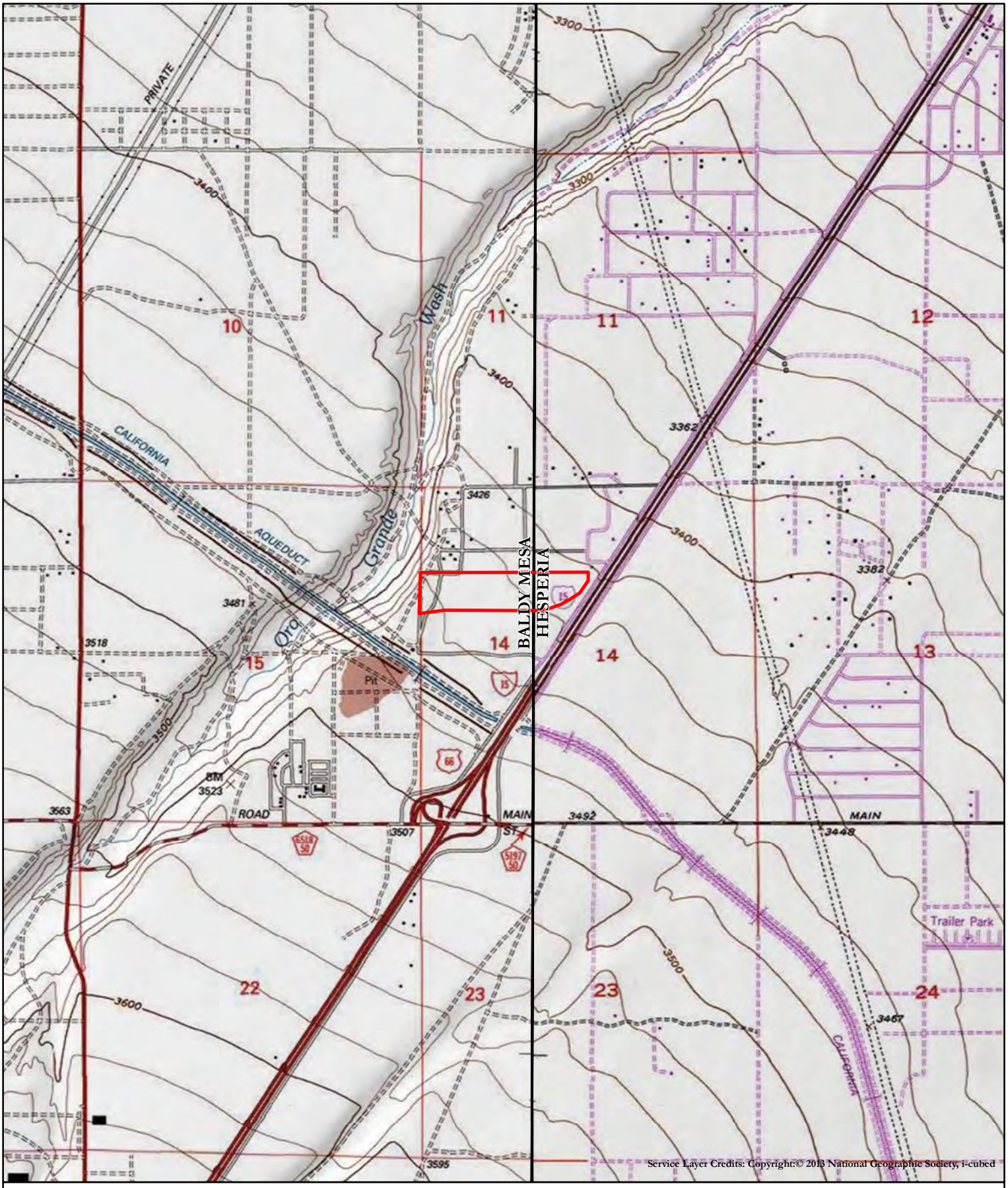
DUKE CRM

● Project Area

0 6 12 Miles

N

1 inch = 6 miles 1:360,000



Map 2 - Project Location
Palmetto Way Industrial Bldg, C-0413

DUKE CRM

Baldy Mesa & Hesperia, Calif USGS 7.5-minute quadrangle
T4N, R5W, Section 14
Date of Map: 1956 / Photorevised: 1980

Project Area
USGS 7.5' Quads

0 0.25 0.5 Miles
0 0.25 0.5 Kilometers
N
1 inch = 2,000 feet
1:24,000



Map 3 - Project Aerial Photo

Palmetto Way Industrial Bldg, C-0413

DUKE CRM

Project Area

0 175 350 Feet

N

1 inch =405 feet

1:4,860

ATTACHMENT 2

NATIVE AMERICAN HERITAGE COMMISSION LETTER

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

PARLIAMENTARIAN
Russell Attebery
Karuk

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

June 21, 2022

Brian Glenn
DUKECRM

Via Email to: brianglenn@dukecrm.com

Re: Palmetto Way Industrial (C-0413) Project, San Bernardino County

Dear Mr. Glenn:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/21/2022

Chemehuevi Indian Tribe
Sierra Pencille, Chairperson
P.O. Box 1976 1990 Palo Verde Drive
Havasu Lake, CA, 92363
Phone: (760) 858 - 4219
Fax: (760) 858-5400
chairman@cit-nsn.gov
Chemehuevi

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov
Cahuilla
Serrano

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov
Cahuilla
Serrano

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com
Quechan

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com
Quechan

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net
Kitanemuk
Vanyume
Tataviam

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive
Highland, CA, 92346
Phone: (909) 864 - 8933
Jessica.Mauck@sanmanuel-nsn.gov
Serrano

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com
Serrano

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com
Serrano

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov
Chemehuevi

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Palmetto Way Industrial (C-0413) Project, San Bernardino County.

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/21/2022

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

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ATTACHMENT 3

PROJECT PHOTOGRAPHS



Site overview. View to northeast.



Site overview. View to southeast.



Site overview. View to east.



Site overview. View to west.



Ground visibility. Plan view.



Scattered modern debris. View to southeast.



Building located on the Project area. View to north.



Small faunal bone. Plan view.

Appendix E – Energy Analysis

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE

ENERGY ANALYSIS

Prepared By:

Haseeb Qureshi | hqureshi@urbanxroads.com
Shannon Wong | swong@urbanxroads.com

Reference Number
14848-04 EA Report

Agency
City of Hesperia

Date
March 24, 2026

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LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
APN	Assessor's Parcel Number
AQIA	Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis
BACM	Best Available Control Measures
BTU	British Thermal Units
Calero	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Hesperia
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GPA	General Plan Amendment
GWh	Gigawatt Hour
HHDT	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy Duty Trucks
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MDV	Medium Duty Trucks
MHDT	Medium-Heavy Duty Trucks
MMcfd	Million Cubic Feet Per Day
mpg	Miles Per Gallon

MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Amargosa and Palmetto High-Cube Warehouse
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SGC	Southwest Gas Corp
TEA-21	Transportation Equity Act for the 21st Century
U.S.	United States
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this Amargosa and Palmetto High-Cube Warehouse *Energy Analysis* are summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the CEQA Guidelines (CEQA Guidelines) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21)
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)

Consistency with the above regulations is discussed in detail in Section 5 of this report.

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Amargosa and Palmetto High-Cube Warehouse (Project). The purpose of this report is to ensure that energy implication is considered by the City of Hesperia (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The proposed project is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,714 square feet of high-cube fulfillment center warehouse building as shown on Exhibit 1-2. The proposed project is anticipated to be constructed and fully operational by year 2027.

It is expected that the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related energy demand sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, stationary and on-site cargo handling equipment. This analysis is intended to describe energy impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

EXHIBIT 1-A: LOCATION MAP

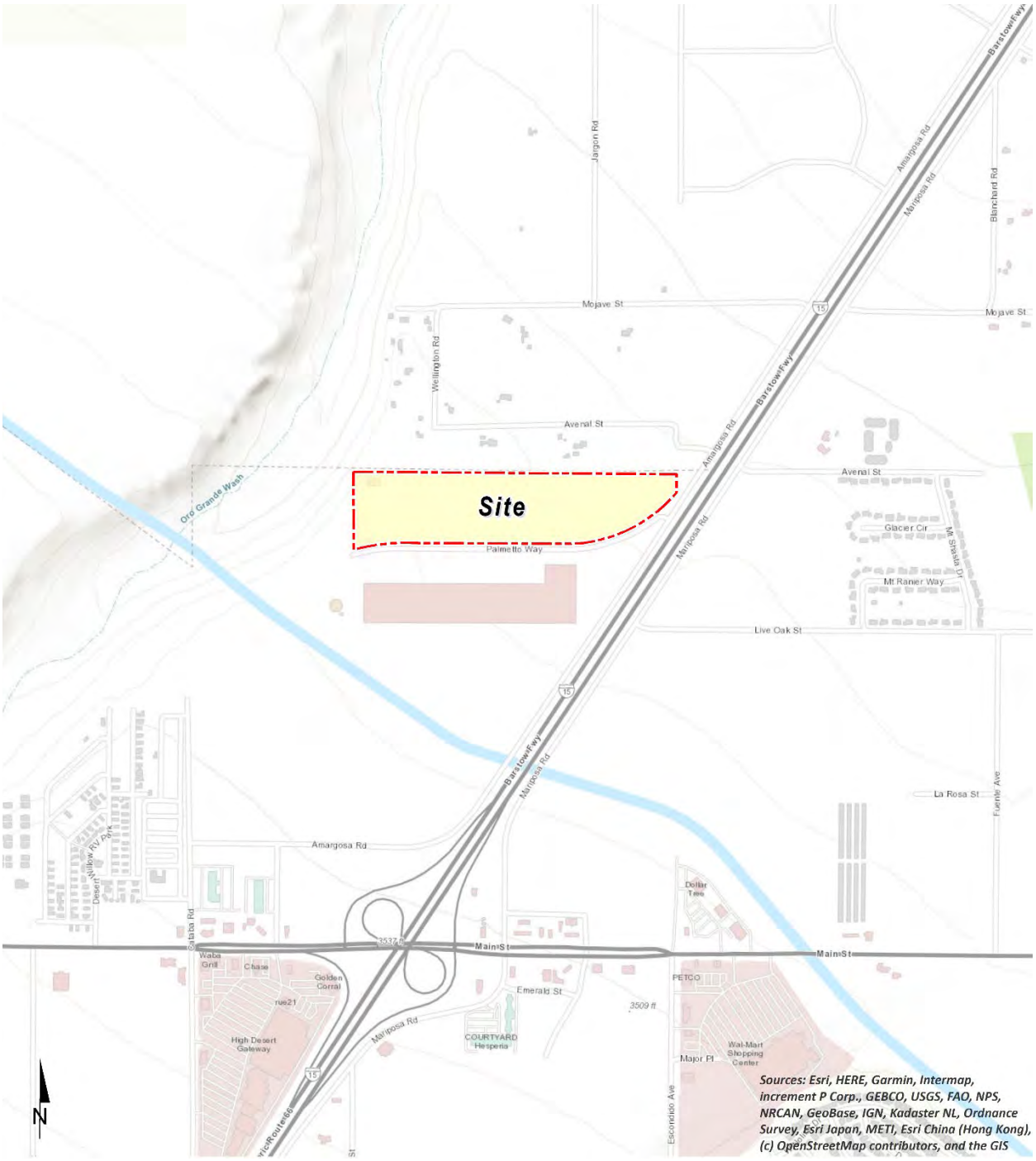
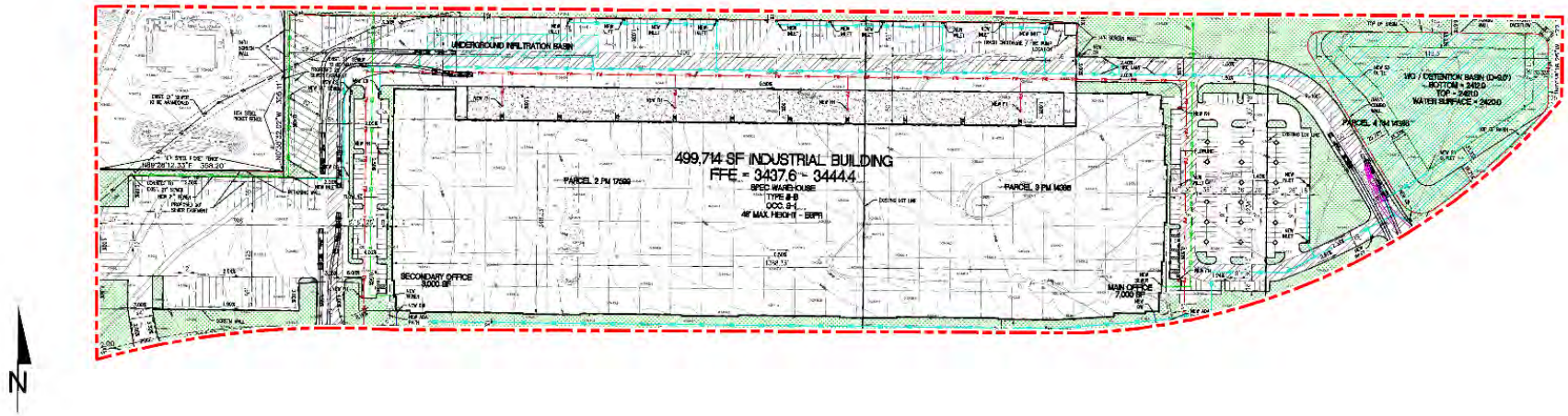


EXHIBIT 1-B: SITE PLAN



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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2023, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates and includes (2):

- As of 2023, approximately 6,817 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2023, approximately 648 million barrels of petroleum
- As of 2023, approximately 2,085 billion cubic feet of natural gas
- As of 2023, approximately 1,277 thousand short tons of coal

According to the EIA, in 2023 the U.S. petroleum consumption comprised about 89% of all transportation energy use (3). In 2024, about 252,048 million gallons (or about 6.001 million barrels) of finished petroleum products were consumed in the U.S., an average of about 690 million gallons per day (or about 16.43 million barrels per day) (4). In 2021, California consumed approximately 12,157 million gallons in motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day) (5).

The most recent data provided by the EIA for energy use in California is reported from 2023, which shows approximate energy usage by each of the following sectors:

- 44.5% for transportation uses
- 21.4% for industrial uses
- 17.1% for residential uses
- 17.0% for commercial uses (6)

According to the EIA, California used approximately 239,480 million kilowatt hours (kWh) of electricity in 2023 (7). By sector in 2023, residential uses utilized 34.6% of the state's electricity, followed by 47.2% for commercial uses, 18.0% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building (7).

According to the EIA, California used approximately 21,036 million therms of natural gas in 2023 (8). In 2023 (the most recent year for which data is available), by sector, industrial uses utilized 31.6% of the state's natural gas, followed by 31.3% used as fuel in the electric power sector, 22.8% from residential, 12.7% from commercial, 1.5% from transportation uses and the remaining 3% was utilized for the operations, processing and production of natural gas itself (8). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas (8).

In 2024, total system electric generation for California was 278,338 gigawatt-hours (GWh), down 1 percent (2,802 GWh) from 2023. The total system electric generation is the sum of all utility-scale in-state generation plus net electricity imports from power plants with a nameplate capacity of at least one megawatt (MW). Clean energy resources accounted for 62% of California's power mix, a 4%

increase from 58% in 2023. In-state generation was 216,181 GWh in 2024, virtually unchanged from the 2023 value of 216,047 GWh. Imported energy decreased to 62,157 GWh, down 5% (3,361 GWh) from 2023 (9). Natural gas is the main source for electricity generation at 40.00% of the total in-state electric generation system power as shown in Table 2-1.

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below (10):

- In 2024, California was the fourth-largest total electricity producer in the nation. It is also the nation's third-largest electricity consumer and imports the second-largest amount of electricity of any state.
- In 2024, California was the eighth-largest producer of crude oil among the 50 states, and the state ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel in the nation and second-largest consumer of motor gasoline after Texas.
- California is the second-largest total energy consumer among the states, after Texas, but its per capita energy consumption is the third-lowest in the nation.
- In 2024, renewable resources, including hydroelectric power and small-scale solar power, supplied 57% of California's in-state electricity generation. Natural gas fueled another 35% and nuclear power provided almost all the rest.

As indicated below, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2024)

Fuel Type	California In-State Generation (GWh)	% of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Total California Energy Mix (GWh)	Total California Power Mix
Coal	263	0.12%	124	5,775	5,899	6,162	2.21%
Natural Gas	86,479	40.00%	84	8,091	8,176	94,655	34.01%
Oil	36	0.02%	-	0	0	36	0.01%
Other (Waste Heat/Petroleum Coke)	198	0.09%	13	9	22	220	0.08%
Unspecified	-	0.00%	80	3,971	4,051	4,051	1.46%
Total Thermal and Unspecified	*86,976*	*40.23%*	*301*	*17,846*	*18,147*	*105,123*	*37.77%*
Nuclear	18,379	8.50%	208	9,026	9,234	27,613	9.92%
Large Hydro	25,222	11.67%	4,479	1,079	5,558	30,780	11.06%
Biomass	4,754	2.20%	614	26	640	5,394	1.94%
Geothermal	10,453	4.84%	212	2,139	2,351	12,803	4.60%
Small Hydro	3,969	1.84%	269	2	270	4,240	1.52%
Solar	50,666	23.44%	536	8,081	8,616	59,283	21.30%
Wind	15,761	7.29%	9,195	8,145	17,341	33,102	11.89%
Total Non-GHG and Renewable Resources	*129,205*	*59.77%*	*15,512*	*28,498*	*44,010*	*173,215*	*62.23%*
System Totals	*216,181*	*100.00%*	*15,813*	*46,344*	*62,157*	*278,338*	*100.00%*

Source: CECs 2024 Total System Electric Generation

2.2 ELECTRICITY

The usage associated with electricity use was calculated using CalEEMod Version 2022.1. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California Independent Service Operator (ISO) studies revealed the extent to which the Mojave Desert Air Basin (MDAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts. Similarly, the subsequent 2024 IEPR provides information and policy recommendations on advancing a clean, reliable, and affordable energy system (11).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California ISO is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (12).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Electricity is currently provided to the Project site by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2024 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (13).

Table 2-2, SCE's specific proportional shares of electricity sources in 2024. As indicated in Table 2-2, the 2024 SCE Power Mix has renewable energy at 35% of the overall energy resources. Biomass and

waste resources are at 0%, geothermal resources are at 4%, eligible hydroelectric resources are at 1%, solar energy is at 19%, and wind power is at 11% (14).

TABLE 2-2: SCE 2024 POWER CONTENT MIX

Energy Resources	2024 SCE Power Mix
Eligible Renewable	35%
Biomass & Waste	0%
Geothermal	4%
Eligible Hydroelectric	1%
Solar	19%
Wind	11%
Large Hydroelectric	5%
Nuclear	9%
Emerging Technologies	0%
Other	0%
Natural Gas	8%
Coal & Petroleum	43%
Unspecified Sources of Power*	100%
Total	35%

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California are residential and small commercial customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore"*

customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the CPUC may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch

Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas

system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order [to] properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California." (15)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the State in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. On January 1, 2025, the Department of Motor Vehicles (DMV) reported 35.9 million registered vehicles in California, which, based on data from the 2021 version of the EMissions FACtor (EMFAC) model, are estimated to consume approximately 17.5 billion gallons of fuel annually (16).[1] Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles (6). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel.

[1] Fuel consumptions estimated utilizing information from EMFAC2021.

California is the second-largest consumer of petroleum products, after Texas, and accounts for 9% of the nation's total consumption. The State is the largest U.S. consumer of jet fuel and the second largest U.S. consumer of motor gasoline. 86% of the petroleum consumed in California is used in the transportation sector (17).

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2024, about 31% of the natural gas delivered to consumers went to the State's industrial sector, and about 30% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the State's utility-scale electricity generation in 2024. The residential sector, where three-fifths of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 15% of the deliveries to end users and the transportation sector consumed the remaining 1% (17).

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

3.1 FEDERAL REGULATIONS

3.1.1 Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

3.1.2 The Transportation Equity Act for the 21st Century (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. The TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. The TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. The TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems (ITS), to help improve operations and management of transportation systems and vehicle safety.

3.2 CALIFORNIA REGULATIONS

3.2.1 Integrated Energy Policy Report (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2024 IEPR was adopted September 2025, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2024 IEPR provides critical updates on California's energy future, focusing on several key areas. It includes an updated energy demand forecast, offering revised projections for electricity consumption and generation needs. Additionally,

the report evaluates the feasibility, costs, and potential benefits of wave and tidal energy resources in accordance with SB 605, which aims to explore alternative renewable energy sources for the state (18).

Compared to the 2023 IEPR, the 2024 update introduces new insights and considerations, particularly in the context of emerging renewable energy technologies like wave and tidal energy and further refines the demand forecasts. This edition provides a more comprehensive view of California's evolving energy landscape and the role of innovative resources in meeting future energy needs.

3.2.2 State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The State Energy Plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

3.2.3 Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards that went into effect on January 1, 2026. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made.

3.2.4 AB 1493 Pavley Regulations and Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

3.2.5 California's Renewable Portfolio Standard (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 52% of total retail sales by 2027 (19).

3.2.6 Clean Energy and Pollution Reduction Act of 2015 (SB 350)

In October 2015, the legislature approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 45% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the CEC, and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electricity transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

3.2.7 Executive Order N-79-20 and Advanced Clean Cars II

On August 25, 2022, CARB approved the Advanced Clean Cars II rule, which codifies the goals set out in Executive Order N-79-20 and establishes a year-by-year roadmap such that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles. Under this regulation, automakers are required to accelerate deliveries of zero-emission light-duty vehicles, beginning with model year 2026. CARB estimates that between 2026 and 2040, the regulation would reduce GHG emissions by a cumulative 395 million metric tons, equivalent to reducing petroleum use by 915 million barrels.

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

Appendix F of the *State CEQA Guidelines* (20) states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
- Increasing reliance on renewable energy sources.

In compliance with Appendix G of the *State CEQA Guidelines* (21), this report analyzes the Project's anticipated energy use during construction and operations to determine if the Project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

4.2 METHODOLOGY

Information from the CalEEMod Version 2022.1 outputs for the *Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis* (AQIA) (22) was utilized in this analysis, detailing Project-related construction equipment, transportation energy demands, and facility energy demands.

4.2.1 CalEEMod

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including MDAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage (23). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendix 4.1.

4.2.2 Emission Factors Model

On May 2, 2022, the EPA approved the 2021 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (24). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of analysis, the 2027 through 2029

analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2021 model run is provided in Appendix 4.2.

On November 21, 2025, the United States Environmental Protection Agency approved the use of EMFAC 2021 off-model adjustment factors. These adjustment factors remove the estimated emission benefits that were attributed to California's Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions, and Heavy Duty Omnibus regulations from EMFAC 2021. Because the preemption waivers for these regulations no longer have effect, these regulations are no longer enforceable. It should be noted that these adjustment factors only apply to emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$. Any effects on fuel efficiency are unknown and unquantifiable at this time.

4.3 Construction Energy Demands

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

4.3.1 Construction Power Cost

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

Construction Duration

For purposes of analysis, Project construction will begin October 2026 and would last through September 2027 (22). The construction schedule utilized in the analysis, shown in Table 4-1, represents a "worst-case" analysis scenario. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (25).

Table 4-1: Construction Duration

Construction Activity	Start Date	End Date	Days
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40

Project Construction Power Cost

The *2025 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.85, which was used to calculate the Project's total construction power cost (26). As shown in Table 4-2, the total power cost of on-site electricity usage during the building construction of the Project is estimated to be approximately $15,666.03.

TABLE 4-2: CONSTRUCTION POWER COST

Land Use	Power Cost	Total Building Size (1,000 SF)	Construction Duration (months)	Total Project Construction Power Cost
High-Cube Fulfillment Center (Non-Sort)	$2.85	499.714	11	$15,666.03
			Total Project Construction Cost	$15,666.03

4.3.2 Construction Electricity Usage

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-2) by the utility provider cost per kWh of electricity.

Project Construction Electricity Usage

The SCE's general service rate schedule was used to determine the Project's electrical usage. As of January 1, 2025, SCE's general service rate is $0.17 per kWh of electricity for industrial uses (27). As shown in Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 90,177 kWh.

TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Total Project Construction Electricity Usage
High-Cube Fulfillment Center (Non-Sort)	$0.17	90,177
Total Project Construction Electricity Usage (kWh)		90,177

4.3.3 Construction Equipment Fuel Estimates

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

Construction Equipment

A summary of construction equipment assumptions by phase is provided at Table 4-4. Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Quantity	Hours
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Project Construction Equipment Fuel Consumption

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer Guidelines (28). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing industrial fuel providers serving the Project area and region.[2] As presented in Table 4-5, Project construction activities would consume an estimated 41,845 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

[2] Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATE

Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption
Site Preparation	13	Rubber Tired Dozers	367	3	8	0.40	3,523	2,476
		Crawler Tractors	87	4	8	0.43	1,197	841
Grading	43	Excavators	36	2	8	0.38	219	509
		Graders	148	1	8	0.41	485	1,128
		Rubber Tired Dozers	367	1	8	0.40	1,174	2,730
		Scrapers	423	2	8	0.48	3,249	7,551
		Crawler Tractors	87	2	8	0.43	599	1,391
Building Construction	187	Cranes	367	1	8	0.29	851	8,606
		Forklifts	82	3	8	0.20	394	3,979
		Generator Sets	14	1	8	0.74	83	838
		Tractors/Loaders/Backhoes	84	3	8	0.37	746	7,540
		Welders	46	1	8	0.45	166	1,674
Paving	33	Pavers	81	2	8	0.42	544	971
		Paving Equipment	89	2	8	0.36	513	914
		Rollers	36	2	8	0.38	219	390
Architectural Coating	40	Air Compressors	37	1	8	0.48	142	307
							Total Construction Fuel Demand (Gallons Fuel)	41,845

4.3.4 Construction Trips and VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and hauling trucks commuting to and from the site. The number of worker, vendor, and hauling trips per phase is presented below in Table 4-6. Worker, vendor, and hauling trips are based on CalEEMod defaults. It should be noted that, for vendor trips specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction, as shown in Table 4-6.

TABLE 4-6: CONSTRUCTION TRIPS AND VMT

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	4	0
Grading	25	13	172
Building Construction	210	56	0
Paving	15	10	0
Architectural Coating	42	0	0

4.3.5 Construction Worker Fuel Estimates

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 797,591 VMT during the 11 months of construction (22). Based on CalEEMod methodology, it is assumed that 50% of all vendor trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1[3]), and 25% are from light-duty-trucks (LDT2[4]). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (24). EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the California sub-area for the 2026 through 2027 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

Table 4-7 provides an estimated annual fuel consumption resulting from Project construction worker trips. Based on Table 4-7, it is estimated that 27,276 gallons of fuel will be consumed related to construction worker trips during full construction of the Project. It should be noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

[3] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[4] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption
2026	LDA						
	Site Preparation	13	9	18.5	2,165	33.14	65
	Grading	43	13	18.5	10,342	33.14	312
	Building Construction	22	105	18.5	42,735	33.14	1,290
	LDT1						
	Site Preparation	13	5	18.5	1,203	25.20	48
	Grading	43	7	18.5	5,569	25.20	221
	Building Construction	22	53	18.5	21,571	25.20	856
	LDT2						
	Site Preparation	13	5	18.5	1,203	25.48	47
	Grading	43	7	18.5	5,569	25.48	219
	Building Construction	22	53	18.5	21,571	25.48	847
2027	LDA						
	Building Construction	165	105	18.5	320,513	33.96	9,439
	Paving	33	8	18.5	4,884	33.96	144
	Architectural Coating	40	21	18.5	15,540	33.96	458
	LDT1						
	Building Construction	165	53	18.5	161,783	25.66	6,305
	Paving	33	4	18.5	2,442	25.66	95
	Architectural Coating	40	11	18.5	8,140	25.66	317
	LDT2						
	Building Construction	165	53	18.5	161,783	26.06	6,207
	Paving	33	4	18.5	2,442	26.06	94
	Architectural Coating	40	11	18.5	8,140	26.06	312
Total Construction Worker Fuel Consumption (Gallons)							27,276

4.3.6 Construction Vendor/Hauling Fuel Estimates

With respect to estimated VMT, the construction vendor/hauling trips (vehicles that deliver materials to the site during construction) would generate an estimated 192,290 VMT along area roadways for the Project over the duration of construction activity (22). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHDT), 50% of vendor trips are from heavy-heavy duty trucks (HHDT), and 100% of hauling trips are from HHDTs. These assumptions are consistent with the CalEEMod defaults utilized within the AQIA (22). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHDT and HHDT vehicle classes within the California sub-area for the 2026 through 2027 calendar years. Data from EMFAC2021 is shown in Appendix 4.2.

As previously shown in Table 4-8, it is estimated that 19,092 gallons of fuel will be consumed related to construction vendor/hauling trips during full construction of the Project. It should be noted that Project construction vendor/hauling trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

TABLE 4-8: CONSTRUCTION VENDOR AND HAULING FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Vendor/ Hauling Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption
2026	MHDT						
	Site Preparation	13	2	10.2	265	7.75	34
	Grading	43	7	10.2	3,070	7.75	396
	Building Construction	22	28	10.2	6,283	7.75	811
	HHDT (Vendor)						
	Site Preparation	13	2	10.2	265	6.46	41
	Grading	43	7	10.2	3,070	6.46	475
	Building Construction	22	28	10.2	6,283	6.46	973
	HHDT (Hauling)						
	Grading	43	172	10.2	75,439	6.46	11,679
2027	MHDT						
	Building Construction	165	28	10.2	47,124	7.91	5,958
	Paving	33	5	10.2	1,683	7.91	213
	HHDT (Vendor)						
	Building Construction	165	28	10.2	47,124	6.61	7,124
	Paving	33	5	10.2	1,683	6.61	254
Total Construction Vendor/Hauling Fuel Consumption (Gallons)							19,092

4.3.7 Construction Energy Efficiency/Conservation Measures

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that there are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in the construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

Construction contractors would be required to comply with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

4.4 Operational Energy Demands

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by passenger car and truck vehicles accessing the Project site), fuel demands from operational equipment, and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 Transportation Energy Demands

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class can be determined by evaluating the vehicle fleet mix and the total VMT. As with worker, vendor, and hauling trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (24). EMFAC2021 was run for the San Bernardino (MD) area for the 2027 calendar year. Data from EMFAC2021 is shown in Appendix 4.2.

As summarized in Table 4-9, the Project would result in 5,563,697 annual VMT and an estimated annual fuel consumption of 298,675 gallons of fuel.

Table 4-9: Total Project-generated Traffic Annual Fuel Consumption

Vehicle Type	Average Vehicle Fuel Economy (mpg)	Annual VMT	Estimated Annual Fuel Consumption
LDA	33.96	2,350,054	69,209
LDT1	25.66	202,167	7,879
LDT2	26.06	1,044,611	40,079
MDV	20.95	753,736	35,972
LHDT1	16.88	141,009	8,354
LHDT2	16.08	38,829	2,415
MHDT	7.91	227,164	28,719
HHDT	6.61	681,492	103,031
MCY	41.33	124,634	3,015
Total Annual Fuel Consumption (Gallons)		5,563,697	298,675

4.4.2 On-Site Cargo Handling Equipment Fuel Demands

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to two (2) 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractor operating at 4 hours a day[5] for 365 days of the year.

[5] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

Project operational activity estimates and associated fuel consumption estimates are based on the annual EMFAC 2021 offroad emissions for the 2027 operational year and were used to derive the total annual fuel consumption associated on-site equipment. As presented in Table 4-10, Project on-site equipment would consume an estimated 9,284 gallons of diesel gas.

TABLE 4-10: ON-SITE CARGO HANDLING EQUIPMENT FUEL CONSUMPTION ESTIMATES

Equipment	Quantity	Usage Hours	Days of Operation	EMFAC 2021 Fuel Consumption (gal./yr)	EMFAC 2021 Activity (hrs./yr)	Total Fuel Consumption
Cargo Handling Equipment	2	4	365	19,286	6,066	9,284
On-site Cargo Handling Equipment Fuel Demand (Gallons)						9,284

4.4.3 Emergency Generator Fuel Demands

It is anticipated that the Project would utilize one (1) 300-hp diesel-powered fire pump and one (1) 700-hp diesel-power emergency generator. For analytical purposes, it is anticipated that the fire pump and emergency generator would operate for a maximum time of 1 hour per day and 50 hours per year for maintenance and testing purposes. As presented in Table 4-11, emergency engine operation for maintenance and testing purposes would consume an estimated 1,883 gallons of diesel fuel per year.

TABLE 4-11: EMERGENCY ENGINE FUEL CONSUMPTION ESTIMATES

Equipment	Horsepower	Fuel Consumption (gal./hour)	Activity (hrs./yr)	Total Fuel Consumption (gal./year)
Fire Pump	300	11	50	565
Generator	700	26	50	1,318
Emergency Engine Fuel Demand (Gallons)				1,883

4.4.4 Facility Energy Demands

Project building operations activities would result in the consumption of electricity and natural gas, which would be supplied to the Project by SCE and SGC. As summarized in Table 4-12, the Project would result in 2,308,031 kWh/year of electricity demand and 9,499,903 kBTU/year of natural gas.

TABLE 4-12: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY

Land Use	Electricity (kWh/year)	Natural Gas (kBTU/year)
High-Cube Fulfillment Center (Non-Sort)	2,308,031	9,499,903
Parking Lot	121,344	0
Total Energy Usage	2,308,031	9,499,903

4.4.5 Operational Energy Efficiency/Conservation Measures

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title 24, California Green Building Standards Code).

The Project would also not result in a substantial increase in demand for transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure (other than site-adjacent and on-site connects to local utilities).

Enhanced Vehicle Fuel Efficiencies

Project annual fuel consumption estimates presented previously in Table 4-9 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands.

4.5 SUMMARY

4.5.1 Construction Energy Demands

The estimated power cost of on-site electricity usage during the building construction of the Project is assumed to be approximately $15,666.03, as summarized on Table 4-2. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 90,177 kWh, as summarized on Table 4-3.

Construction equipment used by the Project would result in single event consumption of approximately 41,845 gallons of diesel fuel, as summarized on Table 4-5. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 27,276 gallons of fuel, as summarized on Table 4-7. Additionally, fuel consumption

from construction vendor and hauling trips (MHDTs and HHDTs) will total approximately 19,092 gallons, as summarized on Table 4-8. Diesel fuel would be supplied by the City and regional industrial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2024 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (29). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 Operational Energy Demands

Transportation Energy Demands

Annual vehicular trips and related VMT generated by the operation of the Project would result in a fuel demand of 298,675 gallons of fuel, as summarized on Table 4-9.

Fuel would be provided by current and future industrial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Ed., 2021); and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to other industrial uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and MDAQMD is looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks.
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet

particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent (30).

- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

On-Site Cargo Handling Equipment Fuel Demands

As previously stated, it is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. On-site cargo handling equipment used by the Project would result in approximately 9,284 gallons of diesel gas. On-site equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed operations that are unusual or energy-intensive, and Project on-site equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

Emergency Generator Fuel Demands

The proposed Project is expected to include the installation of one diesel-powered emergency generator and one diesel-powered fire pump. Operation of these engines for maintenance and testing purposes is estimated to result in annual fuel demand of approximately 1,883 gallons.

Facility Energy Demands

Project facility operational energy demands are estimated at: 2,308,031 kWh/year of electricity demand and 9,499,903 kBTU/year of natural gas for the Project, which would be supplied by SCE and SGC. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other industrial uses of similar scale and configuration.

Implementation of the Project would increase the demand for electricity at the Project site and petroleum consumption in the region during operation. However, the electrical consumption demands of the Project during operation would conform to the state's Title 24 and to CALGreen standards, which implement conservation measures. Further, the proposed Project would not directly require the construction of new energy generation or supply facilities and providers of electricity are in compliance with regulatory requirements that assist in conservation, including requirements that electrical providers achieve state-mandated renewal energy production requirements. With compliance with Title 24 conservation standards and other regulatory requirements, the Project would not be wasteful or inefficient or unnecessarily consume energy resources during construction or operation and would result in a less-than-significant impact with respect to consumption of energy resources.

Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSIONS

5.1 ENERGY IMPACT 1

Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis

A significant impact would occur if the proposed Project would result in the inefficient, wasteful, or unnecessary use of energy.

Construction

Based on CalEEMod estimations within the modeling output files used to estimate GHG emissions associated with the Project, construction-related vehicle trips would result in approximately 797,591 VMT and consume an estimated 27,276 gallons of gasoline and diesel combined during construction. Additionally, on-site construction equipment would consume an estimated 41,845 gallons of diesel fuel. Limitations on idling of vehicles and equipment and requirements that equipment be properly maintained would result in fuel savings. California Code of Regulations, Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. Additionally, given the cost of fuel, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction.

Due to the temporary nature of construction and the financial incentives for developers and contractors to use energy-consuming resources in an efficient manner, the construction phase of the proposed Project would not result in wasteful, inefficient, and unnecessary consumption of energy. Therefore, the construction-related impacts related to electricity and fuel consumption would be less than significant.

Operation

Electricity and Natural Gas

Operation of the proposed Project would consume energy as part of building operations and transportation activities including truck and passenger vehicle traffic. Building operations would involve energy consumption for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, and electronics. Based on CalEEMod energy use estimations, operations for the Project would result in approximately 2,308,031 kWh/year of electricity demand and 9,499,903 kBTU/year of natural gas for the Project.

The proposed Project would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards and would help reduce the amount of energy required for lighting, water

heating, and heating and air conditioning in the proposed building and promote energy conservation.

Fuel

Operational energy would also be consumed during vehicle trips associated with the proposed Project. Fuel consumption would be primarily related to vehicle use by passenger cars and trucks associated with the Project. Based on CalEEMod energy use estimations, project-related vehicle trips would result in approximately 5,563,697 VMT and consume an estimated 298,675 gallons of gasoline and diesel combined, annually (see Appendix 4.1).

The Project will also be providing parking and EV infrastructure that would further promote fuel efficient vehicles. For these reasons, operational-related transportation fuel consumption would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, the operational impact related to vehicle fuel consumption would be less than significant.

5.2 Energy Impact 2

Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis

A significant impact would occur if the proposed Project would conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

Construction

As discussed in Section 5.1 above, the proposed Project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings used during construction, lighting, and other sources. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on-road and off-road diesel-powered equipment and are enforced by the ARB. The proposed Project would comply with these regulations. There are no policies at the local level applicable to energy conservation specific to the construction phase. Thus, it is anticipated that construction of the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, construction-related energy efficiency and renewable energy standards consistency impacts would be less than significant.

Operation

California's Renewable Portfolio Standard (RPS) establishes a goal of renewable energy for local providers to be 44 percent by 2040. Similarly, the State is promoting renewable energy targets to meet the 2022 Scoping Plan greenhouse gas emissions reductions. As discussed in Section 5.1 above, the Project would result in approximately 2,308,031 kWh/year of electricity demand and 9,499,903 kBTU/year of natural gas for the Project.

The proposed Projects would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards, widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and air conditioning in the proposed building and promote energy conservation.

Compliance with the aforementioned mandatory measures would ensure that the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

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5 CERTIFICATION

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

Haseeb Qureshi
Principal
URBAN CROSSROADS, INC.
1133 Camelback #8329
Newport Beach, CA 92658
hqureshi@urbanxroads.com

Education

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010
Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

Professional Affiliations

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

Professional Certifications

Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
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APPENDIX 4.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial
Construction Start Date	10/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80000
Precipitation (days)	1.40000
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.39

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	499.714	1000sqft	11.4719	499,714	306,000	—	—	PC

Parking Lot	482.000	Space	3.18000	0.00000	0.00000	—	—	—
Other Non-Asphalt Surfaces	691.126	1000sqft	15.8661	0.00000	0.00000	—	—	—
User Defined Industrial	499.714	User Defined Unit	0.00000	0.00000	0.00000	—	—	Trucks

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.19643	8.02361	7.23447	13.1491	0.02125	0.27888	1.54096	1.74731	0.25889	0.37057	0.62301	—	3,438.03	3,438.03	0.07630	0.25117	2.70217	3,492.39
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49585	1.46431	1.32029	2.39971	0.00388	0.05089	0.28123	0.31888	0.04725	0.06763	0.11370	—	569.205	569.205	0.01263	0.04158	0.44738	578.204

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
2027	2.35573	2.01637	12.8777	24.8152	0.03937	0.38979	3.22246	3.61225	0.36062	0.77541	1.13603	—	6,954.38	6,954.38	0.15202	0.35187	0.33976	7,063.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.83067	0.70404	7.23447	6.60398	0.02125	0.27888	1.12821	1.40708	0.25889	0.36411	0.62301	—	2,853.78	2,853.78	0.05139	0.25117	1.70386	2,931.62
2027	8.19643	8.02361	6.66702	13.1491	0.01954	0.20635	1.54096	1.74731	0.19078	0.37057	0.56136	—	3,438.03	3,438.03	0.07630	0.16694	2.70217	3,492.39
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.15160	0.12849	1.32029	1.20523	0.00388	0.05089	0.20590	0.25679	0.04725	0.06645	0.11370	—	472.476	472.476	0.00851	0.04158	0.28209	485.363
2027	1.49585	1.46431	1.21673	2.39971	0.00357	0.03766	0.28123	0.31888	0.03482	0.06763	0.10245	—	569.205	569.205	0.01263	0.02764	0.44738	578.204

2.2.2. Onsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	66.3322	65.9438	18.2252	25.4905	0.04180	0.68813	0.00000	0.68813	0.63308	0.00000	0.63308	—	4,318.83	4,318.83	0.17519	0.03504	0.00000	4,333.65
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	5.41210	4.54318	40.6228	42.7354	0.08755	1.79198	5.66228	7.42729	1.64862	2.68618	4.30998	—	9,345.32	9,345.32	0.37909	0.07582	0.00000	9,377.39
2027	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	0.00000	0.36460	0.33543	0.00000	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	0.00000	2,638.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.71844	0.60343	5.38779	5.30758	0.01062	0.24978	0.51864	0.76842	0.22980	0.21149	0.44128	—	1,142.55	1,142.55	0.04635	0.00927	0.00000	1,146.47
2027	7.70256	7.58854	5.34785	7.40975	0.01306	0.19456	0.00000	0.19456	0.17899	0.00000	0.17899	—	1,344.90	1,344.90	0.05456	0.01091	0.00000	1,349.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.13112	0.11013	0.98327	0.96863	0.00194	0.04558	0.09465	0.14024	0.04194	0.03860	0.08053	—	189.162	189.162	0.00767	0.00153	0.00000	189.811
2027	1.40572	1.38491	0.97598	1.35228	0.00238	0.03551	0.00000	0.03551	0.03267	0.00000	0.03267	—	222.664	222.664	0.00903	0.00181	0.00000	223.428

2.2.3. Offsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.42631	1.27625	3.04447	19.8611	0.01630	0.02968	4.05275	4.08243	0.02968	0.97361	1.00329	—	5,765.95	5,765.95	0.04555	0.39189	16.3209	5,900.20
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.43487	1.28688	16.9931	15.7131	0.09685	0.25907	6.71530	6.97437	0.25907	1.66647	1.92554	—	16,591.1	16,591.1	0.06158	2.21765	1.04896	17,254.6
2027	1.02728	0.90440	2.70510	10.7783	0.01383	0.02519	3.22246	3.24764	0.02519	0.77541	0.80059	—	4,324.68	4,324.68	0.04535	0.33053	0.33976	4,424.65
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.11223	0.10062	1.84668	1.29640	0.01063	0.02910	0.60957	0.63866	0.02910	0.15263	0.18172	—	1,711.24	1,711.24	0.00504	0.24190	1.70386	1,785.15
2027	0.49387	0.43507	1.31918	5.73934	0.00647	0.01179	1.54096	1.55275	0.01179	0.37057	0.38237	—	2,093.13	2,093.13	0.02174	0.15603	2.70217	2,142.87
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.02048	0.01836	0.33702	0.23659	0.00194	0.00531	0.11125	0.11656	0.00531	0.02785	0.03316	—	283.315	283.315	0.00084	0.04005	0.28209	295.552
2027	0.09013	0.07940	0.24075	1.04743	0.00118	0.00215	0.28123	0.28338	0.00215	0.06763	0.06978	—	346.541	346.541	0.00360	0.02583	0.44738	354.777

2.3. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

2.4. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Area	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708

Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Area	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.54737	3.17420	10.7417	35.9811	0.15905	0.19726	11.0744	11.2716	0.18745	2.82839	3.01584	—	16,405.1	16,405.1	0.31973	1.38651	20.6434	16,847.0
Area	13.3642	13.2171	0.09019	10.7177	0.00064	0.01904	—	0.01904	0.01439	—	0.01439	—	44.0739	44.0739	0.00185	0.00038	—	44.2329
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	0.24700	0.22477	0.62832	0.57320	0.00108	0.03307	0.00000	0.03307	0.03307	0.00000	0.03307	0.00000	115.002	115.002	0.00462	0.00090	0.00000	115.386
Total	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21
Area	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Energy	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	885.555	885.555	0.08097	0.00536	—	889.175
Water	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

Stationary	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034
Total	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

3. Construction Emissions Details

3.1. Site Preparation (2026)

3.1.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56018	3.83182	34.6139	31.0055	0.05105	1.76500	—	1.76500	1.62380	—	1.62380	—	5,531.64	5,531.64	0.22439	0.04488	—	5,550.63
Dust From Material Movement	—	—	—	—	—	—	5.66228	5.66228	—	2.68618	2.68618	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16242	0.13648	1.23283	1.10430	0.00182	0.06286	—	0.06286	0.05783	—	0.05783	—	197.017	197.017	0.00799	0.00160	—	197.694

Dust From Material Movement	—	—	—	—	—	—	0.20167	0.20167	—	0.09567	0.09567	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02964	0.02491	0.22499	0.20154	0.00033	0.01147	—	0.01147	0.01055	—	0.01055	—	32.6185	32.6185	0.00132	0.00026	—	32.7304
Dust From Material Movement	—	—	—	—	—	—	0.03680	0.03680	—	0.01746	0.01746	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08314	0.07408	0.08488	0.89932	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	221.545	221.545	0.00347	0.00868	0.02194	224.240
Vendor	0.00489	0.00453	0.13214	0.05443	0.00099	0.00180	0.03422	0.03602	0.00180	0.00946	0.01125	—	125.068	125.068	0.00026	0.01707	0.00818	130.170
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00299	0.00268	0.00328	0.03610	0.00000	0.00000	0.00814	0.00814	0.00000	0.00191	0.00191	—	8.12321	8.12321	0.00014	0.00031	0.01301	8.23179
Vendor	0.00018	0.00016	0.00468	0.00191	0.00004	0.00006	0.00122	0.00128	0.00006	0.00034	0.00040	—	4.45165	4.45165	0.00001	0.00061	0.00486	4.63794

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00055	0.00049	0.00060	0.00659	0.00000	0.00000	0.00149	0.00149	0.00000	0.00035	0.00035	—	1.34489	1.34489	0.00002	0.00005	0.00215	1.36287
Vendor	0.00003	0.00003	0.00085	0.00035	0.00001	0.00001	0.00022	0.00023	0.00001	0.00006	0.00007	—	0.73702	0.73702	< 0.000005	0.00010	0.00080	0.76786
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2026)

3.2.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.03197	3.38798	29.9505	28.6693	0.06200	1.38262	—	1.38262	1.27201	—	1.27201	—	6,715.43	6,715.43	0.27241	0.05448	—	6,738.47
Dust From Material Movement	—	—	—	—	—	—	2.69057	2.69057	—	0.98307	0.98307	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47500	0.39913	3.52841	3.37748	0.00730	0.16288	—	0.16288	0.14985	—	0.14985	—	791.133	791.133	0.03209	0.00642	—	793.848

Dust From Material Movement	—	—	—	—	—	—	0.31697	0.31697	—	0.11581	0.11581	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08669	0.07284	0.64393	0.61639	0.00133	0.02973	—	0.02973	0.02735	—	0.02735	—	130.981	130.981	0.00531	0.00106	—	131.431
Dust From Material Movement	—	—	—	—	—	—	0.05785	0.05785	—	0.02114	0.02114	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09502	0.08466	0.09700	1.02780	0.00000	0.00000	0.26142	0.26142	0.00000	0.06128	0.06128	—	253.194	253.194	0.00397	0.00992	0.02508	256.275
Vendor	0.01588	0.01473	0.42944	0.17689	0.00321	0.00585	0.11123	0.11707	0.00585	0.03073	0.03658	—	406.470	406.470	0.00086	0.05549	0.02659	423.053
Hauling	0.25845	0.23564	13.5988	2.96072	0.07981	0.22804	3.12019	3.34823	0.22804	0.79905	1.02709	—	11,523.5	11,523.5	0.01140	1.80912	0.61958	12,063.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01130	0.01013	0.01239	0.13648	0.00000	0.00000	0.03077	0.03077	0.00000	0.00721	0.00721	—	30.7075	30.7075	0.00052	0.00117	0.04920	31.1180
Vendor	0.00190	0.00177	0.05026	0.02057	0.00038	0.00069	0.01309	0.01378	0.00069	0.00362	0.00431	—	47.8552	47.8552	0.00010	0.00654	0.05220	49.8579

Hauling	0.03269	0.02910	1.60339	0.34342	0.00940	0.02686	0.36733	0.39419	0.02686	0.09407	0.12094	—	1,356.78	1,356.78	0.00134	0.21313	1.21526	1,421.54
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00206	0.00185	0.00226	0.02491	0.00000	0.00000	0.00562	0.00562	0.00000	0.00132	0.00132	—	5.08398	5.08398	0.00009	0.00019	0.00814	5.15194
Vendor	0.00035	0.00032	0.00917	0.00375	0.00007	0.00013	0.00239	0.00252	0.00013	0.00066	0.00079	—	7.92297	7.92297	0.00002	0.00108	0.00864	8.25454
Hauling	0.00597	0.00531	0.29262	0.06267	0.00172	0.00490	0.06704	0.07194	0.00490	0.01717	0.02207	—	224.630	224.630	0.00022	0.03529	0.20120	235.352

3.3. Building Construction (2026)

3.3.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.38013	1.15520	10.6724	14.0661	0.02555	0.40936	—	0.40936	0.37661	—	0.37661	—	2,629.89	2,629.89	0.10668	0.02134	—	2,638.91
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08103	0.06782	0.62656	0.82580	0.00150	0.02403	—	0.02403	0.02211	—	0.02211	—	154.397	154.397	0.00626	0.00125	—	154.926
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.01479	0.01238	0.11435	0.15071	0.00027	0.00439	—	0.00439	0.00404	—	0.00404	—	25.5621	25.5621	0.00104	0.00021	—	25.6498
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.99713	0.88840	1.01795	10.7857	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,657.01	2,657.01	0.04164	0.10411	0.26318	2,689.34
Vendor	0.06840	0.06346	1.84991	0.76199	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,750.95	1,750.95	0.00370	0.23902	0.11453	1,822.38
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05908	0.05297	0.06479	0.71375	0.00000	0.00000	0.16091	0.16091	0.00000	0.03772	0.03772	—	160.587	160.587	0.00272	0.00611	0.25727	162.733
Vendor	0.00409	0.00380	0.10789	0.04416	0.00081	0.00148	0.02811	0.02959	0.00148	0.00777	0.00924	—	102.730	102.730	0.00022	0.01403	0.11206	107.029
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01078	0.00967	0.01182	0.13026	0.00000	0.00000	0.02937	0.02937	0.00000	0.00688	0.00688	—	26.5870	26.5870	0.00045	0.00101	0.04259	26.9424
Vendor	0.00075	0.00069	0.01969	0.00806	0.00015	0.00027	0.00513	0.00540	0.00027	0.00142	0.00169	—	17.0082	17.0082	0.00004	0.00232	0.01855	17.7199
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Building Construction (2027)

3.4.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60053	0.50267	4.59855	6.34543	0.01155	0.16482	—	0.16482	0.15163	—	0.15163	—	1,188.77	1,188.77	0.04822	0.00964	—	1,192.85
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10960	0.09174	0.83924	1.15804	0.00211	0.03008	—	0.03008	0.02767	—	0.02767	—	196.815	196.815	0.00798	0.00160	—	197.490
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.05266	0.95317	0.82824	14.9685	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,949.10	2,949.10	0.03239	0.09948	9.18066	2,988.74
Vendor	0.07457	0.05457	1.68966	0.70347	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,710.77	1,710.77	0.00370	0.22519	3.94369	1,781.91
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96011	0.85601	0.92310	10.0477	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,611.99	2,611.99	0.04164	0.10411	0.23747	2,644.30
Vendor	0.06716	0.04840	1.78201	0.73063	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,712.68	1,712.68	0.00370	0.22642	0.10228	1,780.35
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43402	0.38696	0.45599	5.08279	0.00000	0.00000	1.23902	1.23902	0.00000	0.29041	0.29041	—	1,215.46	1,215.46	0.01883	0.04706	1.79287	1,231.75
Vendor	0.03148	0.02299	0.80579	0.32582	0.00625	0.01139	0.21643	0.22781	0.01139	0.05980	0.07119	—	773.726	773.726	0.00167	0.10236	0.76927	805.039
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07921	0.07062	0.08322	0.92761	0.00000	0.00000	0.22612	0.22612	0.00000	0.05300	0.05300	—	201.234	201.234	0.00312	0.00779	0.29683	203.931
Vendor	0.00574	0.00420	0.14706	0.05946	0.00114	0.00208	0.03950	0.04158	0.00208	0.01091	0.01299	—	128.099	128.099	0.00028	0.01695	0.12736	133.283
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Paving (2027)

3.5.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87761	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.25247	0.25247	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07935	0.06667	0.62785	0.89987	0.00126	0.02695	—	0.02695	0.02480	—	0.02480	—	136.621	136.621	0.00554	0.00111	—	137.089
Paving	0.02283	0.02283	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01448	0.01217	0.11458	0.16423	0.00023	0.00492	—	0.00492	0.00453	—	0.00453	—	22.6191	22.6191	0.00092	0.00018	—	22.6967
Paving	0.00417	0.00417	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07523	0.06812	0.05919	1.06979	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	210.771	210.771	0.00231	0.00711	0.65614	213.603
Vendor	0.01332	0.00974	0.30172	0.12562	0.00247	0.00450	0.08556	0.09006	0.00450	0.02364	0.02814	—	305.494	305.494	0.00066	0.04021	0.70423	318.198
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00620	0.00553	0.00652	0.07265	0.00000	0.00000	0.01771	0.01771	0.00000	0.00415	0.00415	—	17.3737	17.3737	0.00027	0.00067	0.02563	17.6065
Vendor	0.00112	0.00082	0.02878	0.01164	0.00022	0.00041	0.00773	0.00814	0.00041	0.00214	0.00254	—	27.6331	27.6331	0.00006	0.00366	0.02747	28.7514
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00113	0.00101	0.00119	0.01326	0.00000	0.00000	0.00323	0.00323	0.00000	0.00076	0.00076	—	2.87642	2.87642	0.00004	0.00011	0.00424	2.91496
Vendor	0.00021	0.00015	0.00525	0.00212	0.00004	0.00007	0.00141	0.00148	0.00007	0.00039	0.00046	—	4.57497	4.57497	0.00001	0.00061	0.00455	4.76012
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Architectural Coating (2027)

3.6.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18287	0.15113	1.10822	1.50052	0.00230	0.02540	—	0.02540	0.02337	—	0.02337	—	178.017	178.017	0.00722	0.00144	—	178.628

Architectural	63.6908	63.6908	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02004	0.01656	0.12145	0.16444	0.00025	0.00278	—	0.00278	0.00256	—	0.00256	—	19.5087	19.5087	0.00079	0.00016	—	19.5757
Architectural Coatings	6.97981	6.97981	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00366	0.00302	0.02216	0.03001	0.00005	0.00051	—	0.00051	0.00047	—	0.00047	—	3.22989	3.22989	0.00013	0.00003	—	3.24097
Architectural Coatings	1.27382	1.27382	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21053	0.19063	0.16565	2.99371	0.00000	0.00000	0.54867	0.54867	0.00000	0.12861	0.12861	—	589.820	589.820	0.00648	0.01990	1.83613	597.747
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02104	0.01876	0.02211	0.24644	0.00000	0.00000	0.06007	0.06007	0.00000	0.01408	0.01408	—	58.9316	58.9316	0.00091	0.00228	0.08693	59.7213
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00384	0.00342	0.00403	0.04498	0.00000	0.00000	0.01096	0.01096	0.00000	0.00257	0.00257	—	9.75680	9.75680	0.00015	0.00038	0.01439	9.88755
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-Rail	4.15146	3.76212	2.30326	48.6373	0.10354	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	10,475.4	10,475.4	0.33718	0.23207	30.8327	10,583.8
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.31016	0.25970	9.35407	2.78402	0.09193	0.19078	3.03890	3.22967	0.18248	0.81104	0.99352	—	9,669.36	9,669.36	0.02474	1.36909	25.3071	10,103.3
Total	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	3.83715	3.45277	2.56232	36.1453	0.09224	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	9,332.15	9,332.15	0.34629	0.24935	0.79931	9,415.91
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.29445	0.24570	9.85783	2.80133	0.09198	0.19089	3.03890	3.22979	0.18259	0.81104	0.99363	—	9,674.11	9,674.11	0.02416	1.37099	0.65660	10,083.9
Total	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.60062	0.54021	0.41656	6.13508	0.01474	0.00634	1.54915	1.55550	0.00584	0.39023	0.39607	—	1,352.55	1,352.55	0.04949	0.03627	1.87712	1,366.48

Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.04678	0.03909	1.54380	0.43146	0.01429	0.02966	0.47192	0.50158	0.02837	0.12596	0.15432	—	1,363.51	1,363.51	0.00344	0.19328	1.54063	1,422.73
Total	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	362.435	362.435	0.03455	0.00419	—	364.546
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0549	19.0549	0.00182	0.00022	—	19.1660
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	381.490	381.490	0.03636	0.00441	—	383.712

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86722	3.56896	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Total	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.96354	1.96354	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.12738	0.12738	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.34805	0.32121	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Total	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.03155	0.02871	0.08027	0.07323	0.00014	0.00422	0.00000	0.00422	0.00422	0.00000	0.00422	0.00000	13.3279	13.3279	0.00054	0.00010	0.00000	13.3724
Fire Pump	0.01352	0.01231	0.03440	0.03138	0.00006	0.00181	0.00000	0.00181	0.00181	0.00000	0.00181	0.00000	5.71196	5.71196	0.00023	0.00004	0.00000	5.73103
Total	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/1/2026	10/19/2026	5.00000	13.0000	—
Grading	Grading	10/20/2026	12/17/2026	5.00000	43.0000	—
Building Construction	Building Construction	12/2/2026	8/19/2027	5.00000	187.000	—

Paving	Paving	8/5/2027	9/20/2027	5.00000	33.0000	—
Architectural Coating	Architectural Coating	7/27/2027	9/20/2027	5.00000	40.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Crawler Tractors	Diesel	Average	4.00000	8.00000	87.0000	0.43000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Grading	Crawler Tractors	Diesel	Average	2.00000	8.00000	87.0000	0.43000
Building Construction	Cranes	Diesel	Average	1.000000	8.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00000	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	13.0000	10.2000	HHDT,MHDT
Grading	Hauling	172.395	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	209.880	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	56.0000	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	10.00000	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	41.9760	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00000	0.00000	749,571	249,857	49,778.8

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5000	0.00000	0.00000
Grading	59,302.0	—	172.000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	19.0461

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Unrefrigerated Warehouse-No Rail	0.00000	0%
Paving	Parking Lot	3.18000	100%
Paving	Other Non-Asphalt Surfaces	15.8661	0%
Paving	User Defined Industrial	0.00000	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00000	346.196	0.03300	0.00400

2027	0.00000	346.196	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790.048	390.776	368.789	245,583	14,396.9	7,121.04	6,720.37	4,475,203
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	114.934	56.9674	53.4694	35,723.5	3,502.05	1,735.80	1,629.21	1,088,495

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Unrefrigerated Warehouse-No Rail	Wood Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Gas Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Propane Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Electric Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	No Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Conventional Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Non-Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0

Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0
Other Non-Asphalt Surfaces	Wood Fireplaces	0	0
Other Non-Asphalt Surfaces	Gas Fireplaces	0	0
Other Non-Asphalt Surfaces	Propane Fireplaces	0	0
Other Non-Asphalt Surfaces	Electric Fireplaces	0	0
Other Non-Asphalt Surfaces	No Fireplaces	0	0
Other Non-Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Non-Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Pellet Wood Stoves	0	0
User Defined Industrial	Wood Fireplaces	0	0
User Defined Industrial	Gas Fireplaces	0	0
User Defined Industrial	Propane Fireplaces	0	0
User Defined Industrial	Electric Fireplaces	0	0
User Defined Industrial	No Fireplaces	0	0
User Defined Industrial	Conventional Wood Stoves	0	0
User Defined Industrial	Catalytic Wood Stoves	0	0
User Defined Industrial	Non-Catalytic Wood Stoves	0	0
User Defined Industrial	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0.00000	0.00000	749,571	249,857	49,778.8

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,308,031	346.196	0.0330	0.0040	9,499,903
Parking Lot	121,344	346.196	0.0330	0.0040	0.00000
Other Non-Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000
User Defined Industrial	0.00000	346.196	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,558,863	6,774,392
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	469.731	0.00000
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.000000	1.000000	50.0000	700.000	0.73000
Fire Pump	Diesel	1.000000	1.000000	50.0000	300.000	0.73000

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6400	annual days of extreme heat
Extreme Precipitation	4.95000	annual days with precipitation above 20 mm
Sea Level Rise	0.00000	meters of inundation depth
Wildfire	22.7300	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.0516
AQ-PM	32.2215
AQ-DPM	57.8843
Drinking Water	29.7490
Lead Risk Housing	13.7996
Pesticides	0.00000
Toxic Releases	24.9687
Traffic	83.1125
Effect Indicators	—
CleanUp Sites	73.3669
Groundwater	0.00000
Haz Waste Facilities/Generators	65.9166
Impaired Water Bodies	0.00000
Solid Waste	0.00000

Sensitive Population	—
Asthma	84.5713
Cardio-vascular	99.4890
Low Birth Weights	5.81216
Socioeconomic Factor Indicators	—
Education	67.1222
Housing	11.2421
Linguistic	19.8674
Poverty	67.1734
Unemployment	82.7434

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Median HI	—
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541

Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3

Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0000

Healthy Places Index Score for Project Location (b)	42.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Based on client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, Building Construction, and Paving
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	4.33800	3.18000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	11/13/2026	10/1/2026
Site Preparation	Site Preparation	End Date	12/11/2026	10/19/2026
Site Preparation	Site Preparation	Work Days per Phase	20.0000	13.0000
Grading	Grading	Start Date	12/12/2026	10/20/2026
Grading	Grading	End Date	2/13/2027	12/17/2026
Grading	Grading	Work Days per Phase	45.0000	43.0000
Building Construction	Building Construction	Start Date	2/14/2027	12/2/2026
Building Construction	Building Construction	End Date	1/14/2029	8/19/2027
Building Construction	Building Construction	Work Days per Phase	500.000	187.000
Paving	Paving	Start Date	1/15/2029	8/5/2027
Paving	Paving	End Date	3/5/2029	9/20/2027
Paving	Paving	Work Days per Phase	35.0000	33.0000
Architectural Coating	Architectural Coating	Start Date	3/6/2029	7/27/2027
Architectural Coating	Architectural Coating	End Date	4/24/2029	9/20/2027
Architectural Coating	Architectural Coating	Work Days per Phase	35.0000	40.0000

8.4.2. Off-Road Equipment

Phase Name	Equipment Type	Model Parameter	Default Value	New Value

Building Construction	Cranes	Hours Per Day	7.00000	8.00000
Building Construction	Tractors/Loaders/Backhoes	Hours Per Day	7.00000	8.00000
Architectural Coating	Air Compressors	Hours Per Day	6.00000	8.00000

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Building Construction	Vendor	One-Way Trips per Day	81.9031	56.0000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	Weekday Trip Rate	size/day	1.74000	1.58100
Unrefrigerated Warehouse-No Rail	Saturday Trip Rate	size/day	1.74000	0.78200
Unrefrigerated Warehouse-No Rail	Sunday Trip Rate	size/day	1.74000	0.73800
User Defined Industrial	Weekday Trip Rate	size/day	0.00000	0.23000
User Defined Industrial	Saturday Trip Rate	size/day	0.00000	0.11400
User Defined Industrial	Sunday Trip Rate	size/day	0.00000	0.10700
User Defined Industrial	Non-Res H-W Trip Length	miles	23.2027	30.4700
User Defined Industrial	Non-Res W-O Trip Length	miles	19.9619	0.00000
User Defined Industrial	Non-Res O-O Trip Length	miles	7.47372	0.00000
User Defined Industrial	Non-Res H-W Trip	%	60.8491	100.0000
User Defined Industrial	Non-Res W-O Trip	%	9.43396	0.00000
User Defined Industrial	Non-Res O-O Trip	%	29.7170	0.00000

8.5.1.2. Fleet Mix

Land Use	Season	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	A	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	A	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	A	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	A	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	S	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 2	%	22%	23%

Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	S	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	S	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	W	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	W	Medium-Duty Trucks	%	16%	17%

Unrefrigerated Warehouse-No Rail	W	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Urban Buses	%	< 0.5%	0%
User Defined Industrial	A	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	A	Passenger Cars	%	49%	0%
User Defined Industrial	A	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	A	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	A	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	A	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	A	Motorcycles	%	3%	0%
User Defined Industrial	A	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	A	Motor Homes	%	1%	0%
User Defined Industrial	A	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	A	Other Buses	%	< 0.5%	0%
User Defined Industrial	A	School Buses	%	< 0.5%	0%
User Defined Industrial	A	Urban Buses	%	< 0.5%	0%
User Defined Industrial	S	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	S	Passenger Cars	%	49%	0%
User Defined Industrial	S	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	S	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	S	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	S	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	S	Motorcycles	%	3%	0%

User Defined Industrial	S	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	S	Motor Homes	%	1%	0%
User Defined Industrial	S	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	S	Other Buses	%	< 0.5%	0%
User Defined Industrial	S	School Buses	%	< 0.5%	0%
User Defined Industrial	S	Urban Buses	%	< 0.5%	0%
User Defined Industrial	W	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	W	Passenger Cars	%	49%	0%
User Defined Industrial	W	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	W	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	W	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	W	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	W	Motorcycles	%	3%	0%
User Defined Industrial	W	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	W	Motor Homes	%	1%	0%
User Defined Industrial	W	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	W	Other Buses	%	< 0.5%	0%
User Defined Industrial	W	School Buses	%	< 0.5%	0%
User Defined Industrial	W	Urban Buses	%	< 0.5%	0%

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APPENDIX 4.2:

EMFAC2021

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (MD)
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Gasoline and Diesel Fuel Consumption, 1000 diesel equivalent gallons/day for Natural Gas Fuel Consumption, kWh/day for Energy Consump

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (MD)	2026	HHDT	Aggregate	Aggregate	Gasoline	1.899683726	174.3616545	0.04264416	42.64416028	432943.5148	174.3616545	2796460.733	6.46	HHDT
San Bernardino (MD)	2026	HHDT	Aggregate	Aggregate	Diesel	13602.29678	2771005.673	432.4799113	432479.9113		2771005.673			HHDT
San Bernardino (MD)	2026	HHDT	Aggregate	Aggregate	Electricity	127.8696544	22710.61538	0	0		22710.61538			HHDT
San Bernardino (MD)	2026	HHDT	Aggregate	Aggregate	Natural Gas	37.04411336	2570.082115	0.420959404	420.9594044		2570.082115			HHDT
San Bernardino (MD)	2026	LDA	Aggregate	Aggregate	Gasoline	305489.5206	12749590.6	418.9786743	418978.6743	426567.5923	12749590.6	14135869.68	33.14	LDA
San Bernardino (MD)	2026	LDA	Aggregate	Aggregate	Diesel	876.928382	28379.27708	0.672827136	672.8271359		28379.27708			LDA
San Bernardino (MD)	2026	LDA	Aggregate	Aggregate	Electricity	17937.07805	893570.6016	0	0		893570.6016			LDA
San Bernardino (MD)	2026	LDA	Aggregate	Aggregate	Plug-in Hybric	9527.688784	464329.1939	6.916090829	6916.090829		464329.1939			LDA
San Bernardino (MD)	2026	LDT1	Aggregate	Aggregate	Gasoline	29409.2209	1000607.571	39.96456636	39964.56636	40018.19281	1000607.571	1008273.494	25.20	LDT1
San Bernardino (MD)	2026	LDT1	Aggregate	Aggregate	Diesel	12.10299031	155.9958444	0.006621349	6.621348638		155.9958444			LDT1
San Bernardino (MD)	2026	LDT1	Aggregate	Aggregate	Electricity	81.37647626	4027.245512	0	0		4027.245512			LDT1
San Bernardino (MD)	2026	LDT1	Aggregate	Aggregate	Plug-in Hybric	66.2932027	3482.681855	0.047005099	47.00509905		3482.681855			LDT1
San Bernardino (MD)	2026	LDT2	Aggregate	Aggregate	Gasoline	142488.6507	5890341.748	235.1564544	235156.4544	236829.03	5890341.748	6034570.502	25.48	LDT2
San Bernardino (MD)	2026	LDT2	Aggregate	Aggregate	Diesel	473.8572412	20738.00724	0.620690062	620.6900618		20738.00724			LDT2
San Bernardino (MD)	2026	LDT2	Aggregate	Aggregate	Electricity	1345.306205	49286.61888	0	0		49286.61888			LDT2
San Bernardino (MD)	2026	LDT2	Aggregate	Aggregate	Plug-in Hybric	1480.744283	74204.12838	1.051885518	1051.885518		74204.12838			LDT2
San Bernardino (MD)	2026	LHDT1	Aggregate	Aggregate	Gasoline	12487.32989	470160.4045	34.21673632	34216.73632	53301.96324	470160.4045	875352.836	16.42	LHDT1
San Bernardino (MD)	2026	LHDT1	Aggregate	Aggregate	Diesel	10626.46114	392131.3081	19.08522692	19085.22692		392131.3081			LHDT1
San Bernardino (MD)	2026	LHDT1	Aggregate	Aggregate	Electricity	189.3434838	13061.12332	0	0		13061.12332			LHDT1
San Bernardino (MD)	2026	LHDT2	Aggregate	Aggregate	Gasoline	1661.454966	61116.2607	5.010679571	5010.679571	15258.7239	61116.2607	240080.2672	15.73	LHDT2
San Bernardino (MD)	2026	LHDT2	Aggregate	Aggregate	Diesel	4658.884027	175787.53	10.24804433	10248.04433		175787.53			LHDT2
San Bernardino (MD)	2026	LHDT2	Aggregate	Aggregate	Electricity	48.36806308	3176.476456	0	0		3176.476456			LHDT2
San Bernardino (MD)	2026	MCY	Aggregate	Aggregate	Gasoline	17895.1562	102596.0564	2.488161137	2488.161137	2488.161137	102596.0564	102596.0564	41.23	MCY
San Bernardino (MD)	2026	MDV	Aggregate	Aggregate	Gasoline	103415.0479	4072512.867	203.5278514	203527.8514	206971.262	4072512.867	4238157.587	20.48	MDV
San Bernardino (MD)	2026	MDV	Aggregate	Aggregate	Diesel	1665.031155	65783.33298	2.764958659	2764.958659		65783.33298			MDV
San Bernardino (MD)	2026	MDV	Aggregate	Aggregate	Electricity	1464.490328	53552.91746	0	0		53552.91746			MDV
San Bernardino (MD)	2026	MDV	Aggregate	Aggregate	Plug-in Hybric	969.4210543	46308.47	0.678452004	678.4520035		46308.47			MDV
San Bernardino (MD)	2026	MH	Aggregate	Aggregate	Gasoline	2707.798413	23494.3462	4.926517077	4926.517077	5930.430641	23494.3462	33999.10524	5.73	MH
San Bernardino (MD)	2026	MH	Aggregate	Aggregate	Diesel	1229.529392	10504.75905	1.003913564	1003.913564		10504.75905			MH
San Bernardino (MD)	2026	MHDT	Aggregate	Aggregate	Gasoline	866.6572583	63825.99852	12.12732851	12127.32851	29914.49002	63825.99852	231729.9812	7.75	MHDT
San Bernardino (MD)	2026	MHDT	Aggregate	Aggregate	Diesel	2842.733423	163441.0013	17.7380062	17738.0062		163441.0013			MHDT
San Bernardino (MD)	2026	MHDT	Aggregate	Aggregate	Electricity	52.39361043	4021.365345	0	0		4021.365345			MHDT
San Bernardino (MD)	2026	MHDT	Aggregate	Aggregate	Natural Gas	9.762820125	441.6160368	0.049155313	49.15531296		441.6160368			MHDT
San Bernardino (MD)	2026	OBUS	Aggregate	Aggregate	Gasoline	251.3212704	14921.97326	2.901576422	2901.576422	3581.716592	14921.97326	20261.84274	5.66	OBUS
San Bernardino (MD)	2026	OBUS	Aggregate	Aggregate	Diesel	78.36164299	5061.302238	0.68014017	680.1401701		5061.302238			OBUS
San Bernardino (MD)	2026	OBUS	Aggregate	Aggregate	Electricity	2.250369302	278.5672458	0	0		278.5672458			OBUS
San Bernardino (MD)	2026	SBUS	Aggregate	Aggregate	Gasoline	100.6931333	6500.469455	0.697198308	697.1983081	2610.051605	6500.469455	21263.28761	8.15	SBUS
San Bernardino (MD)	2026	SBUS	Aggregate	Aggregate	Diesel	633.2263747	14570.63628	1.912853297	1912.853297		14570.63628			SBUS
San Bernardino (MD)	2026	SBUS	Aggregate	Aggregate	Electricity	5.499587425	192.1818785	0	0		192.1818785			SBUS
San Bernardino (MD)	2026	UBUS	Aggregate	Aggregate	Gasoline	55.39653929	5286.245751	1.395975188	1395.975188	4595.49546	5286.245751	19337.57917	4.21	UBUS
San Bernardino (MD)	2026	UBUS	Aggregate	Aggregate	Diesel	2.365880584	238.0224353	0.030309796	30.3097962		238.0224353			UBUS
San Bernardino (MD)	2026	UBUS	Aggregate	Aggregate	Electricity	0.194695832	20.5946752	0	0		20.5946752			UBUS
San Bernardino (MD)	2026	UBUS	Aggregate	Aggregate	Natural Gas	104.4970827	13792.71631	3.169210476	3169.210476		13792.71631			UBUS

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (MD)
Calendar Year: 2027
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for Combustion VMT and Electric VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Gasoline and Diesel Fuel Consumption, 1000 diesel equivalent gallons/day for Natural Gas Fuel Consumption, kWh/day for Energy Consump

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (MD)	2027	HHDT	Aggregate	Aggregate	Gasoline	1.648579799	174.2440566	0.041192773	41.19277277	432433.3143	174.2440566	2860308.613	6.61	HHDT
San Bernardino (MD)	2027	HHDT	Aggregate	Aggregate	Diesel	13884.76721	2820783.598	431.9614958	431961.4958		2820783.598			HHDT
San Bernardino (MD)	2027	HHDT	Aggregate	Aggregate	Electricity	203.611053	36692.37755	0	0		36692.37755			HHDT
San Bernardino (MD)	2027	HHDT	Aggregate	Aggregate	Natural Gas	38.43417877	2658.392904	0.430625717	430.6257172		2658.392904			HHDT
San Bernardino (MD)	2027	LDA	Aggregate	Aggregate	Gasoline	304027.2597	12731878.05	411.1416484	411141.6484	418868.1427	12731878.05	14222963.06	33.96	LDA
San Bernardino (MD)	2027	LDA	Aggregate	Aggregate	Diesel	791.9986965	25719.02477	0.603756671	603.7566709		25719.02477			LDA
San Bernardino (MD)	2027	LDA	Aggregate	Aggregate	Electricity	19845.71259	978565.9728	0	0		978565.9728			LDA
San Bernardino (MD)	2027	LDA	Aggregate	Aggregate	Plug-in Hybric	10089.08881	486800.0113	7.122737607	7122.737607		486800.0113			LDA
San Bernardino (MD)	2027	LDT1	Aggregate	Aggregate	Gasoline	28604.64563	980711.821	38.53767219	38537.67219	38599.60265	980711.821	990384.3406	25.66	LDT1
San Bernardino (MD)	2027	LDT1	Aggregate	Aggregate	Diesel	5.007041186	67.97847461	0.002773222	2.773221572		67.97847461			LDT1
San Bernardino (MD)	2027	LDT1	Aggregate	Aggregate	Electricity	103.0738565	5167.769102	0	0		5167.769102			LDT1
San Bernardino (MD)	2027	LDT1	Aggregate	Aggregate	Plug-in Hybric	85.15205729	4436.772028	0.059157244	59.15724431		4436.772028			LDT1
San Bernardino (MD)	2027	LDT2	Aggregate	Aggregate	Gasoline	144969.3345	6012722.206	235.2207429	235220.7429	237025.8269	6012722.206	6177721.312	26.06	LDT2
San Bernardino (MD)	2027	LDT2	Aggregate	Aggregate	Diesel	490.9747542	21438.14839	0.631769614	631.7696139		21438.14839			LDT2
San Bernardino (MD)	2027	LDT2	Aggregate	Aggregate	Electricity	1643.240566	59550.62595	0	0		59550.62595			LDT2
San Bernardino (MD)	2027	LDT2	Aggregate	Aggregate	Plug-in Hybric	1696.063481	84010.33114	1.173314446	1173.314446		84010.33114			LDT2
San Bernardino (MD)	2027	LHDT1	Aggregate	Aggregate	Gasoline	12236.93655	464329.1064	32.94415895	32944.15895	51467.90578	464329.1064	868717.7888	16.88	LHDT1
San Bernardino (MD)	2027	LHDT1	Aggregate	Aggregate	Diesel	10382.56114	382582.5848	18.52374683	18523.74683		382582.5848			LHDT1
San Bernardino (MD)	2027	LHDT1	Aggregate	Aggregate	Electricity	324.0115716	21806.0977	0	0		21806.0977			LHDT1
San Bernardino (MD)	2027	LHDT2	Aggregate	Aggregate	Gasoline	1625.501605	60008.19906	4.810685273	4810.685273	14806.73288	60008.19906	238038.6474	16.08	LHDT2
San Bernardino (MD)	2027	LHDT2	Aggregate	Aggregate	Diesel	4609.596429	172724.7487	9.996047611	9996.047611		172724.7487			LHDT2
San Bernardino (MD)	2027	LHDT2	Aggregate	Aggregate	Electricity	82.72499724	5305.699576	0	0		5305.699576			LHDT2
San Bernardino (MD)	2027	MCY	Aggregate	Aggregate	Gasoline	17753.58837	101645.3447	2.45927065	2459.27065	2459.27065	101645.3447	101645.3447	41.33	MCY
San Bernardino (MD)	2027	MDV	Aggregate	Aggregate	Gasoline	102864.4143	4066676.874	199.2739452	199273.9452	202687.61	4066676.874	4247001.967	20.95	MDV
San Bernardino (MD)	2027	MDV	Aggregate	Aggregate	Diesel	1629.221988	63977.00557	2.658124755	2658.124755		63977.00557			MDV
San Bernardino (MD)	2027	MDV	Aggregate	Aggregate	Electricity	1765.912839	63809.64436	0	0		63809.64436			MDV
San Bernardino (MD)	2027	MDV	Aggregate	Aggregate	Plug-in Hybric	1106.835926	52538.44322	0.755540048	755.5400476		52538.44322			MDV
San Bernardino (MD)	2027	MH	Aggregate	Aggregate	Gasoline	2537.344563	22132.90334	4.642709583	4642.709583	5622.15158	22132.90334	32390.38483	5.76	MH
San Bernardino (MD)	2027	MH	Aggregate	Aggregate	Diesel	1203.732966	10257.48149	0.979441997	979.4419971		10257.48149			MH
San Bernardino (MD)	2027	MHDT	Aggregate	Aggregate	Gasoline	851.4993437	63572.61874	11.94882571	11948.82571	29776.65146	63572.61874	235527.2767	7.91	MHDT
San Bernardino (MD)	2027	MHDT	Aggregate	Aggregate	Diesel	2894.94761	164867.3175	17.77661694	17776.61694		164867.3175			MHDT
San Bernardino (MD)	2027	MHDT	Aggregate	Aggregate	Electricity	87.70720254	6626.741831	0	0		6626.741831			MHDT
San Bernardino (MD)	2027	MHDT	Aggregate	Aggregate	Natural Gas	10.33883793	460.5986904	0.051208816	51.20881562		460.5986904			MHDT
San Bernardino (MD)	2027	OBUS	Aggregate	Aggregate	Gasoline	242.7542455	14272.10158	2.739920725	2739.920725	3417.473965	14272.10158	19807.83649	5.80	OBUS
San Bernardino (MD)	2027	OBUS	Aggregate	Aggregate	Diesel	80.83651185	5095.174015	0.67755324	677.5532396		5095.174015			OBUS
San Bernardino (MD)	2027	OBUS	Aggregate	Aggregate	Electricity	3.585157774	440.5608898	0	0		440.5608898			OBUS
San Bernardino (MD)	2027	SBUS	Aggregate	Aggregate	Gasoline	102.6708676	6684.892111	0.713082299	713.0822991	2611.048878	6684.892111	21497.64905	8.23	SBUS
San Bernardino (MD)	2027	SBUS	Aggregate	Aggregate	Diesel	635.5381207	14496.27372	1.897966579	1897.966579		14496.27372			SBUS
San Bernardino (MD)	2027	SBUS	Aggregate	Aggregate	Electricity	9.099422248	316.4832097	0	0		316.4832097			SBUS
San Bernardino (MD)	2027	UBUS	Aggregate	Aggregate	Gasoline	52.52046673	4916.496218	1.29529281	1295.29281	4481.902403	4916.496218	19376.45372	4.32	UBUS
San Bernardino (MD)	2027	UBUS	Aggregate	Aggregate	Diesel	1.40315264	125.2130251	0.012242667	12.24266678		125.2130251			UBUS
San Bernardino (MD)	2027	UBUS	Aggregate	Aggregate	Electricity	3.938840231	488.8184315	0	0		488.8184315			UBUS
San Bernardino (MD)	2027	UBUS	Aggregate	Aggregate	Natural Gas	104.9183223	13845.92604	3.174366926	3174.366926		13845.92604			UBUS

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Appendix F – Geotechnical Investigation

GEOTECHNICAL INVESTIGATION
PROPOSED WAREHOUSE

NWC Palmeto Way and Amargosa Road
Hesperia, California
for
Rachamin 5, LLC



SOUTHERN
CALIFORNIA
GEOTECHNICAL
A California Corporation

July 18, 2022

Rachamin 5, LLC
6001 East Slauson Avenue
Commerce, California 90040

Attention: Mr. Ramin Namvar

Project No.: **22G203-1**

Subject: **Geotechnical Investigation**
Proposed Warehouse
NWC Palmeto Way and Amargosa Road
Hesperia, California

Mr. Namvar:

In accordance with your request, we have conducted a geotechnical investigation at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Joseph Lozano Leon
Project Engineer

Robert G. Trazo, M.Sc., GE 2655
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT TRAZO
No. 2655
GEOTECHNICAL
STATE OF CALIFORNIA

Distribution: (1) Addressee

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A Plate 1: Site Location Map
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E Seismic Design Parameters

1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report.

Geotechnical Design Considerations

- Artificial fill soils were encountered at one of the boring locations, extending from the ground surface to a depth of 4½± feet. The fill soils possess varying strengths and densities, and are considered to represent undocumented fill. These soils, in their present condition, are not considered suitable for support of the foundation loads of the new structure.
- The fill soils are underlain by native alluvium which possesses varying strengths and densities. The results of laboratory testing indicate that the near-surface soils within the upper 5 to 6± feet possess a potential for moderate to severe collapse when exposed to moisture infiltration as well as moderate consolidation when exposed to load increases in the range of those that will be exerted by the new foundations.
- Remedial grading will be necessary to remove all of the undocumented fill soils in their entirety and the upper portion of the near-surface native alluvial soils, and replace these materials as compacted structural fill soils.

Site Preparation Recommendations

- Site stripping within vegetated areas should remove include all vegetation, including tree root masses and any organic topsoil.
- Remedial grading is recommended to be performed within the proposed building area in order to remove all of the undocumented fill soils in their entirety, and the upper portion of the near-surface native alluvial soils. The soils within the proposed building pad area should be overexcavated to a depth of 5 feet below existing grade and to a depth of at least 4 feet below proposed building pad subgrade elevations, whichever is greater.
- The depth of overexcavation should also be sufficient to remove any existing fill soils. The proposed foundation influence zones should be overexcavated to a depth of at least 3 feet below proposed foundation bearing grade.
- Following completion of the overexcavation, the resulting subgrade soils should be evaluated by the geotechnical engineer to identify any additional soils that should be overexcavated. The resulting soils should be scarified and moisture conditioned to achieve a moisture content of 0 to 4 percent above optimum moisture, to a depth of at least 12 inches. The overexcavation subgrade soils should then be recompacted under the observation of the geotechnical engineer. The previously excavated soils may then be replaced as compacted structural fill. All structural fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- The new pavement and flatwork subgrade soils are recommended to be scarified to a depth of 12± inches, moisture conditioned and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.

Building Foundation Recommendations

- Spread footing foundations, supported in newly placed structural fill soils.
- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.

- Reinforcement consisting of at least two (2) No. 5 rebars (1 top and 1 bottom) in strip footings. Additional reinforcement may be necessary for structural considerations.

Building Floor Slab Recommendations

- Conventional Slab on Grade, at least 6 inches thick
- Modulus of Subgrade Reaction: k = 150 psi/in
- Reinforcement is not considered to be necessary for geotechnical considerations.
- The actual thickness and reinforcement of the floor slab should be determined by the structural engineer, based on the imposed slab loading.

Pavements

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	4	6	7	8	10
Compacted Subgrade	12	12	12	12	12

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		(TI =7.0)	(TI =8.0)	(TI =9.0)
PCC	5	5½	6½	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

2.0 SCOPE OF SERVICES

The scope of services performed for this project was in accordance with our Proposal No. 22P103R, dated January 10, 2022, revised date April 27, 2022. The scope of services included a visual site reconnaissance, subsurface exploration, field and laboratory testing, and geotechnical engineering analysis to provide criteria for preparing the design of the building foundations, building floor slab, and parking lot pavements along with site preparation recommendations and construction considerations for the proposed development. The evaluation of the environmental aspects of this site was beyond the scope of services for this geotechnical investigation.

3.0 SITE AND PROJECT DESCRIPTION

3.1 Site Conditions

The subject site is located at the northwest corner of Palmeto Way and Amargosa Road in Hesperia, California. The site is bounded to the north by Avenal Street, to the west by a vacant lot and a commercial/industrial building, to the south by Palmeto Way, and to the east by Amargosa Road. The general location of the site is illustrated on the Site Location Map, included as Plate 1 in Appendix A of this report.

The site consists of an irregularly-shaped property, 30.52± acres in size. The site is currently vacant and generally undeveloped, with the exception of a series of ramps and embankments located in the central region of the site, presumably used as a dirt bike track. The ground surface cover for the site generally consists of exposed soil with spare native shrubs and brush growth, and a few medium-sized trees scattered throughout.

Detailed topographic information was not available at the time of this report. Based on elevations obtained from Google Earth, and visual observations made at the time of the subsurface investigation, the overall site topography slopes downward to the northeast at a gradient of less than 2 percent.

3.2 Proposed Development

The most current conceptual site plan, identified as Preliminary Site Plan – Scheme 02 prepared by RGA, was provided to our office by the client. The plan indicates that the new development will consist of one (1) new warehouse, 545,000± ft² in size, located in the northern region of the subject site. Dock-high doors will be constructed on the south side of the proposed building. The new building is expected to be surrounded by asphaltic concrete (AC) pavements in the parking and drive areas, and Portland cement concrete (PCC) pavements in the loading dock area. Several landscaped planters and concrete flatwork are also expected to be included throughout the site.

Detailed structural information has not been provided. It is assumed that the new building will be a single-story structure of tilt-up concrete construction, supported on a conventional shallow foundation system with a concrete slab-on-grade floor. Based on the assumed construction, maximum column and wall loads are expected to be on the order of 100 kips and 4 to 7 kips per linear foot, respectively.

No significant amounts of below-grade construction, such as basements or crawl spaces, are expected to be included in the proposed development. Based on the assumed topography, cuts and fills of up to 5± feet are expected to be necessary to achieve the proposed building pad grades. It should be noted that this estimate does not include any remedial grading recommendations which are presented in a subsequent section of this report.

4.0 SUBSURFACE EXPLORATION

4.1 Scope of Exploration/Sampling Methods

The subsurface exploration conducted for this project consisted of nine (9) borings (identified as Boring Nos. B-1 through B-9) advanced to depths of 10 to 25± feet below the existing site grades. All of the borings were logged during drilling by a member of our staff.

The borings were advanced with hollow-stem augers, by a conventional truck-mounted drilling rig. Representative bulk and relatively undisturbed soil samples were taken during drilling. Relatively undisturbed soil samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. In-situ samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

The approximate locations of the borings are indicated on the Boring Location Plan, included as Plate 2 in Appendix A of this report. The Boring Logs, which illustrate the conditions encountered at the boring locations, as well as the results of some of the laboratory testing, are included in Appendix B.

4.2 Geotechnical Conditions

Artificial Fill

Artificial fill soils were encountered at the ground surface at Boring No. B-3, extending to a depth of 4½± feet below the existing site grades. The fill soils generally consist of medium dense silty sands to sandy silts. The fill soils possess a disturbed and mottled appearance resulting in their classification as artificial fill.

Alluvium

Native alluvium was encountered beneath the artificial fill soils at Boring No. B-3 and at the ground surface at the remaining boring locations, extending to at least the maximum depth explored of 25± feet. The near-surface soils generally consist of medium dense to dense sands, silty sands and sandy silts with varying gravel content, extending to depths of 5½ to 17± feet below the existing site grades. At greater depths, the alluvium generally consists of dense to very dense sands, silty sands, sandy silts, and clayey sands. Boring No. B-1 encountered a stratum consisting of very loose silty sands at a depth of 5½ to 8± feet. Boring No. B-2 encountered a stratum

consisting of very dense silty sands to sandy silts at a depth of 2½ to 4½± feet. Boring No. B-2 also encountered a stratum consisting of hard silty clays at a depth of 17 to 20± feet.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings and the moisture contents of the recovered soil samples, the static groundwater table is considered to have existed at a depth in excess of 25± feet at the time of the subsurface exploration.

Water level data was obtained from the California Department of Water Resources Water Data Library website, https://wdl.water.ca.gov/waterdatalibrary/. The nearest monitoring well on record (identified as State Well Number: 04N05W15G001S) is located approximately 3,200 feet west of the project site. Water level readings within this monitoring well indicate a high groundwater level of 638± feet below the ground surface in February 2015.

5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. The field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring Logs and are periodically referenced throughout this report.

Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Consolidation

Selected soil samples have been tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch-high ring, approximately 2.416 inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-7 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

One representative bulk sample has been tested for its maximum dry density and optimum moisture content. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557 and are presented on Plate C-8 in Appendix C of this report. This test is generally used to compare the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Direct Shear

One direct shear test was performed on a representative sample of the near-surface soils to determine its shear strength parameters in accordance with ASTM D-3080. The testing apparatus is designed to accept either natural or remolded samples in a one-inch high ring, approximately 2.416 inches in diameter. For tests on remolded soils, three samples of the same soil are prepared

by remolding them to 90± percent compaction and near optimum moisture. Each of the three samples are then loaded with different normal loads and the resulting shear strength is determined for that particular normal load. The shearing of the samples is performed at a rate slow enough to permit the dissipation of excess pore water pressure. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The results of the direct shear test are presented on Plate C-9 in Appendix C of this report.

Expansion Index

The expansion potential of the on-site soils was determined in general accordance with ASTM D-4829. The testing apparatus is designed to accept a 4-inch diameter, 1-in high, remolded sample. The sample is initially remolded to 50± 1 percent saturation and then loaded with a surcharge equivalent to 144 pounds per square foot. The sample is then inundated with water and allowed to swell against the surcharge. The resultant swell or consolidation is recorded after a 24-hour period. The results of the EI testing are as follows:

Sample Identification	Expansion Index	Expansive Potential
B-5 @ 0 to 5 feet	0	Non-Expansive

Soluble Sulfates

A representative sample of the near-surface soil was submitted to a subcontracted analytical laboratory for determination of soluble sulfate content. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which comes into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

Sample Identification	Soluble Sulfates (%)	Sulfate Classification
B-4 @ 0 to 5 feet	0.049	Not Applicable (S0)

Corrosivity Testing

One representative sample of the near-surface soils was submitted to a subcontracted corrosion engineering laboratory to identify potentially corrosive characteristics with respect to common construction materials. The corrosivity testing included a determination of the electrical resistivity, pH, and chloride and nitrate concentrations of the soils, as well as other tests. The results of some of these tests are presented below.

Sample Identification	Saturated Resistivity (ohm-cm)	pH	Chlorides (mg/kg)	Nitrates (mg/kg)
B-4 @ 0 to 5 feet	16,750	7.3	77.7	8.7

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. The recommendations contained in this report should be taken into the design, construction, and grading considerations.

The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record. The recommendations are provided with the assumption that an adequate program of client consultation, construction monitoring, and testing will be performed during the final design and construction phases to verify compliance with these recommendations. Maintaining Southern California Geotechnical, Inc., (SCG) as the geotechnical consultant from the beginning to the end of the project will provide continuity of services. The geotechnical engineering firm providing testing and observation services shall assume the responsibility of Geotechnical Engineer of Record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site-specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structure should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigations. Therefore, the possibility of significant fault rupture on the site is considered to be low.

The potential for other geologic hazards such as seismically induced settlement, lateral spreading, tsunamis, inundation, seiches, flooding, and subsidence affecting the site is considered low. Based on Map Number 06071C6475H, dated August 28, 2008, prepared by the Federal Emergency Management Agency (FEMA) Flood Maps, the project site is in an area designated as Zone X which is determined to be outside the 0.2% annual chance floodplain.

Seismic Design Parameters

The 2019 California Building Code (CBC) provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site. Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2019 edition of the California Building Code (CBC), which was adopted on January 1, 2020.

The 2019 CBC Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool, a web-based software application available at the website www.seismicmaps.org. This software application calculates seismic design parameters in accordance with several building code reference documents, including ASCE 7-16, upon which the 2019 CBC is based. The application utilizes a database of risk-targeted maximum considered earthquake (MCER) site accelerations at 0.01-degree intervals for each of the code documents. The tables below were created using data obtained from the application. The output generated from this program is included as Plate E-1 in Appendix E of this report.

The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped S1 value greater than 0.2. However, Section 11.4.8 of ASCE 7-16 also indicates an exception to the requirement for a site-specific ground motion hazard analysis for certain structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) indicates that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." **Based on our understanding of the proposed development, the seismic design parameters presented below were calculated assuming that the exception in Section 11.4.8 applies to the proposed structure at this site. However, the structural engineer should verify that this exception is applicable to the proposed structure.** Based on the exception, the spectral response accelerations presented below were calculated using the site coefficients (Fa and Fv) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC.

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter		Value
Mapped MCE_R Acceleration at 0.2 sec Period	S_S	1.466
Mapped MCE_R Acceleration at 1.0 sec Period	S_1	0.569
Site Class	---	D
Site Modified Spectral Acceleration at 0.2 sec Period	S_{MS}	1.466
Site Modified Spectral Acceleration at 1.0 sec Period	S_{M1}	0.985
Design Spectral Acceleration at 0.2 sec Period	S_{DS}	0.978
Design Spectral Acceleration at 1.0 sec Period	S_{D1}	0.657

It should be noted that the site coefficient F_v and the parameters S_{M1} and S_{D1} were not included in the SEAOC/OSHPD Seismic Design Maps Tool output for the 2019 CBC. We calculated these

parameters-based on Table 1613.2.3(2) in Section 16.4.4 of the 2019 CBC using the value of S_1 obtained from the Seismic Design Maps Tool, assuming that a site-specific ground motion hazards analysis is not required for the proposed building at this site.

Liquefaction

Liquefaction is the loss of the strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and grain size characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Clayey (cohesive) soils or soils which possess clay particles (d<0.005mm) in excess of 20 percent (Seed and Idriss, 1982) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the subject site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County Land Use Plans, General Plan, Geologic Hazard Overlays. Maps FH05 for the Baldy Mesa Quadrangle and FH06 for the Hesperia Quadrangle indicate that the subject site is not located within an area of liquefaction susceptibility. Based on the mapping performed by the county of San Bernardino, the subsurface profile identified in this report, which includes moderate to high strength alluvium, and the lack of a historic high groundwater table within the upper 50± feet, liquefaction is not considered to be a design concern for this project.

6.2 Geotechnical Design Considerations

General

The near-surface soils encountered at the boring locations generally consist of native alluvium, with the exception of Boring No. B-3, extending to at least the maximum depth explored of 25± feet below the existing site grades. The artificial fill soils at Boring No. B-3 extend to a depth of 4½± feet from the ground surface. Based on a lack of documentation regarding the placement and compaction of the existing fill materials, these soils are considered to consist of undocumented fill. Therefore, the fill soils in their present condition are not suitable for the support of the foundation loads of the proposed building. The fill soils are underlain by native alluvium which possesses varying strengths and densities. The results of laboratory testing indicate that the near-surface soils within the upper 5 to 6± feet possess a potential for moderate to severe collapse when exposed to moisture infiltration as well as moderate consolidation when exposed to load increases in the range of those that will be exerted by the new foundations. The underlying native soils possess more favorable consolidation/collapse characteristics. Based on these conditions, remedial grading is recommended within the proposed building area, in order to remove and replace a portion of the near-surface alluvial soils as compacted structural fill.

Settlement

Laboratory testing indicates that some samples of soils taken from the near-surface native alluvial soils possess a minor collapse potential when exposed to moisture infiltration. The proposed remedial grading will remove the near-surface collapsible native soils from within the proposed building area. Therefore, following completion of the recommended grading, post-construction settlements are expected to be within tolerable limits.

Expansion

Laboratory testing performed on a representative sample of the near surface soils indicates that these materials are considered to be non-expansive (EI = 0). Therefore, no design considerations related to expansive soils are considered warranted for this site. It is recommended that additional expansion index testing be conducted at the completion of rough grading to verify the expansion potential of the as-graded building pad.

Soluble Sulfates

The results of the soluble sulfate testing indicate that the selected sample of the on-site soils corresponds to Class S0 with respect to the American Concrete Institute (ACI) Publication 318-14 Building Code Requirements for Structural Concrete and Commentary, Section 4.3. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at pad grade within the building area.

Corrosion Potential

The results of laboratory testing indicate that the tested sample of the on-site soils possesses a saturated resistivity value of 16,750 ohm-cm, and a pH value of 7.3. These test results have been evaluated in accordance with guidelines published by the Ductile Iron Pipe Research Association (DIPRA). The DIPRA guidelines consist of a point system by which characteristics of the soils are used to quantify the corrosivity characteristics of the site. Resistivity and pH are two of the five factors that enter into the evaluation procedure. Redox potential, relative soil moisture content and sulfides are also included. Although sulfide testing was not part of the scope of services for this project, we have evaluated the corrosivity characteristics of the on-site soils using resistivity, pH and moisture content. Based on these factors, and utilizing the DIPRA procedure, the on-site soils are not considered to be corrosive to ductile iron pipe. Therefore, polyethylene protection is not expected to be required for cast iron or ductile iron pipes.

Based on American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary, reinforced concrete that is exposed to external sources of chlorides requires corrosion protection for the steel reinforcement contained within the concrete. ACI 318 defines concrete exposed to moisture and an external source of chlorides as "severe" or exposure category C2. ACI 318 does not clearly define a specific chloride concentration at which contact with the adjacent soil will constitute a "C2" or severe exposure. However, the Caltrans Memo to Designers 10-5, Protection of Reinforcement Against Corrosion Due to Chlorides, Acids and Sulfates, dated June 2010, indicates that soils possessing chloride concentrations greater than 500 mg/kg are considered to be corrosive to reinforced concrete. The results of the

laboratory testing indicate chloride concentrations of 77.7 mg/kg. Although the soils contain some chlorides, we do not expect that the chloride concentrations of the tested soils are high enough to constitute a "severe" or C2 chloride exposure. Therefore, a chloride exposure category of C1 is considered appropriate for this site.

Nitrates present in soil can be corrosive to copper tubing at concentrations greater than 50 mg/kg. The tested sample possesses a nitrate concentration of 8.7 mg/kg. Based on this test result, the on-site soils are not considered to be corrosive to copper pipe.

Since SCG does not practice in the area of corrosion engineering, we recommend that the client contact a corrosion engineer to provide a more thorough evaluation of these test results.

Shrinkage/Subsidence

Removal and recompaction of the existing fill soils and near-surface alluvium is estimated to result in an average shrinkage of 4 to 14 percent. However, potential shrinkage for individual samples ranged locally between 3 and 22 percent. The potential shrinkage estimate is based on dry density testing performed on small-diameter samples taken at the boring locations. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods instead of laboratory density testing on small-diameter samples. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1 feet.

These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Slope Stability

No evidence of landslides or deep-seated slope instability was noted during our investigation. However, the loose granular soils on sloping ground surfaces could be prone to surficial failures.

Newly constructed fill slopes, comprised of properly compacted engineered fill, at inclinations of 2h:1v (horizontal to vertical) will possess adequate gross stability.

Cut slopes excavated within the existing granular alluvial soils may be subject to surficial instability due to the lack of cohesion within these materials. Therefore, stability fills may be required within these areas. This condition may affect proposed cut slopes at the site. The need for stability fills should be determined by SCG as part of the future detailed grading plan review.

Grading and Foundation Plan Review

Grading and foundation plans were unavailable at the time of this report. It is therefore recommended that we be provided with copies of the preliminary grading and foundation plans,

when they become available, for review with regard to the conclusions, recommendations, and assumptions contained within this report.

6.3 Site Grading Recommendations

The grading recommendations presented below are based on the subsurface conditions encountered at the boring locations and our understanding of the proposed development. We recommend that all grading activities be completed in accordance with the Grading Guide Specifications included as Appendix D of this report, unless superseded by site-specific recommendations presented below.

Site Stripping

Vegetation including weeds, grasses, shrubs, and trees on the site should be stripped and disposed of off-site. Stripping should include any organic soils and any root masses from trees. The actual extent of site stripping should be determined in the field by the geotechnical engineer, based on the organic content and stability of the materials encountered.

Treatment of Existing Soils: Building Pad

Remedial grading should be performed within the proposed building area in order to remove the existing undocumented fill soils and a portion of the near-surface native alluvial soils. Based on conditions encountered at the boring locations, the existing soils within the proposed building area are recommended to be overexcavated to a depth of at least 5 feet below existing grade and to a depth of at least 4 feet below proposed building pad subgrade elevation, whichever is greater.

Additional overexcavation should be performed within the influence zones of the new foundations, to provide for a new layer of compacted structural fill extending to a depth of 3 feet below proposed foundation bearing grade.

The overexcavation area should extend at least 5 feet beyond the building foundations and perimeters. If the proposed structure incorporates any exterior columns (such as for a canopy or overhang) the area of overexcavation should also encompass these areas.

Following completion of the overexcavation, the subgrade soils within the building area should be evaluated by the geotechnical engineer to verify their suitability to serve as the structural fill subgrade, as well as to support the foundation loads of the new structure. This evaluation should include proofrolling and probing to identify any soft, loose, or otherwise unstable soils that must be removed. **Some localized areas of deeper excavation may be required if additional fill materials or loose, porous, or low-density native soils are encountered at the base of the overexcavation**. It should be noted that very loose soils extending to a depth of 8± feet were encountered at Boring No. B-1.

After a suitable overexcavation subgrade has been achieved, the exposed soils should be scarified to a depth of at least 12 inches, moisture conditioned to achieve a moisture content of 0 to 4 percent above optimum moisture content. The moisture conditioning of the overexcavation subgrade soils should be verified by the geotechnical engineer. The subgrade soils should then

be recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The previously excavated soils may then be replaced as compacted structural fill.

Treatment of Existing Soils: Retaining Walls and Site Walls

The existing soils within the areas of any proposed retaining walls and non-retaining site walls should be overexcavated to a depth of 3 feet below foundation bearing grade and replaced as compacted structural fill, as discussed above for the proposed building pad. Any undocumented fill soils within any of these foundation areas should be removed in their entirety. The overexcavation areas should extend at least 5 feet beyond the foundation perimeters, and to an extent equal to the depth of fill below the new foundations. Any erection pads used to construct the walls are considered to be part of the foundation system with respect to these remedial grading recommendations. The overexcavation subgrade soils should be evaluated by the geotechnical engineer prior to scarifying, moisture conditioning, and recompacting the upper 12 inches of exposed subgrade soils. The previously excavated soils may then be replaced as compacted structural fill.

If the full lateral recommended remedial grading cannot be completed for the proposed retaining walls and site walls located along property lines, the foundations for those walls should be designed using a reduced allowable bearing pressure. Furthermore, the contractor should take necessary precautions to protect the adjacent improvements during rough grading. Specialized grading techniques, such as A-B-C slot cuts or temporary shoring, will likely be required during remedial grading. The geotechnical engineer of record should be contacted if additional recommendations, such as shoring design recommendations, are required during grading.

Treatment of Existing Soils: Parking and Drive Areas

Based on economic considerations, overexcavation of the existing near-surface existing soils in the new flatwork, parking and drive areas is not considered warranted, with the exception of areas where lower strength or unstable soils are identified by the geotechnical engineer during grading. Subgrade preparation in the new flatwork, parking and drive areas should initially consist of removal of all soils disturbed during stripping and demolition operations.

The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. Any such materials should be removed to a level of firm and unyielding soil. The exposed subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above the optimum moisture content, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength surficial soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed flatwork, parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within these areas. The grading recommendations presented above do not mitigate the extent of undocumented fill or compressible/collapsible native alluvium in the flatwork, parking and drive areas. As such, some settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the flatwork,

parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to within 0 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer.
- All grading and fill placement activities should be completed in accordance with the requirements of the 2019 CBC and the grading code of the city of Hesperia.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. As an alternative, a clean sand (minimum Sand Equivalent of 30) may be placed within trenches and compacted in place (jetting or flooding is not recommended). It is recommended that materials in excess of 3 inches in size not be used for utility trench backfill. Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by the city of Hesperia. All utility trench backfills should be witnessed by the geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v (horizontal to vertical) plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

Any soils used to backfill voids around subsurface utility structures, such as manholes or vaults, should be placed as compacted structural fill. If it is not practical to place compacted fill in these areas, then such void spaces may be backfilled with lean concrete slurry. Uncompacted pea gravel or sand is not recommended for backfilling these voids since these materials have a potential to settle and thereby cause distress of pavements placed around these subterranean structures.

6.4 Construction Considerations

Moisture Sensitive Subgrade Soils

Some of the near-surface soils possess appreciable silt and clay content and will become unstable if exposed to significant moisture infiltration or disturbance by construction traffic. If grading occurs during a period of relatively wet weather, an increase in subgrade instability in localized areas should also be expected. The site should, therefore, be graded to prevent ponding of surface water and to prevent water from running into excavations.

Excavation Considerations

The near-surface soils are predominately granular in composition. These materials will likely be subject to caving within shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, the inclination of temporary slopes should not exceed 2h:1v. Maintaining adequate moisture content within the near-surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Groundwater

The historic groundwater table at this site is considered to exist at a depth greater than 25± feet. Therefore, groundwater is not expected to impact the grading or foundation construction activities.

6.5 Foundation Design and Construction

Based on the preceding grading recommendations, it is assumed that the new building pad will be underlain by structural fill soils used to replace the upper portion of the existing variable strength, potentially collapsible alluvial soils. These new structural fill soils are expected to extend to a depth of at least 3 feet below proposed foundation bearing grade, underlain by 1± foot of additional soil that has been densified and moisture conditioned in place. Based on this subsurface profile, the proposed structure may be supported on conventional shallow foundations.

Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Minimum wall/column footing width: 14 inches/24 inches.
- Minimum longitudinal steel reinforcement within strip footings: Two (2) No. 5 rebars (1 top and 1 bottom).

- Minimum foundation embedment: 12 inches into suitable structural fill soils, and at least 18 inches below adjacent exterior grade. Interior column footings may be placed immediately beneath the floor slab.

- It is recommended that the perimeter building foundations be continuous across all exterior doorways. Any flatwork adjacent to the exterior doors should be doweled into the perimeter foundations in a manner determined by the structural engineer.

The allowable bearing pressure presented above may be increased by one-third when considering short duration wind or seismic loads. The minimum steel reinforcement recommended above is based on geotechnical considerations; additional reinforcement may be necessary for structural considerations. The actual design of the foundations should be determined by the structural engineer.

Foundation Construction

The foundation subgrade soils should be evaluated at the time of overexcavation, as discussed in Section 6.3 of this report. It is further recommended that the foundation subgrade soils be evaluated by the geotechnical engineer immediately prior to steel or concrete placement. Soils suitable for direct foundation support should consist of newly placed structural fill, compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Any unsuitable materials should be removed to a depth of suitable bearing compacted structural fill or suitable native alluvium (where reduced bearing pressures are utilized), with the resulting excavations backfilled with compacted fill soils. As an alternative, lean concrete slurry (500 to 1,500 psi) may be used to backfill such isolated overexcavations.

The foundation subgrade soils should also be properly moisture conditioned to 0 to 4 percent above the Modified Proctor optimum, to a depth of at least 12 inches below bearing grade. Since it is typically not feasible to increase the moisture content of the floor slab and foundation subgrade soils once rough grading has been completed, care should be taken to maintain the moisture content of the building pad subgrade soils throughout the construction process.

Estimated Foundation Settlements

Post-construction total and differential settlements of shallow foundations designed and constructed in accordance with the previously presented recommendations are estimated to be less than 1.0 and 0.5 inches, respectively. Differential movements are expected to occur over a 50-foot span, thereby resulting in an angular distortion of less than 0.002 inches per inch.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slab and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 300 lbs/ft^3
- Friction Coefficient: 0.30

These are allowable values, and include a factor of safety. When combining friction and passive resistance, the passive pressure component should be reduced by one-third. These values assume that footings will be poured directly against compacted structural fill. The maximum allowable passive pressure is 3,000 lbs/ft^2.

6.6 Floor Slab Design and Construction

Subgrades which will support new floor slab should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Based on the anticipated grading which will occur at this site, the floor of the new structure may be constructed as a conventional slab-on-grade supported on newly placed structural fill soils. These fill soils are expected to extend to a depth of at least 4 feet below finished pad grade. Based on geotechnical considerations, the floor slab may be designed as follows:

- Minimum slab thickness: 6 inches.

- Modulus of Subgrade Reaction: k = 150 psi/in

- Minimum slab reinforcement: Reinforcement is not required for geotechnical conditions. The actual floor slab reinforcement should be determined by the structural engineer, based upon the imposed loading.

- Slab underlayment: If moisture sensitive floor coverings will be used the minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area where such moisture sensitive floor coverings are anticipated. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as a 15 mil. Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview.

- Moisture condition the floor slab subgrade soils to 0 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.

- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slab should be completed by the structural engineer to verify adequate thickness and reinforcement.

6.7 Retaining Wall Design and Construction

Small retaining walls are expected to be necessary in the area of the new truck loading docks and may also be required to facilitate the new site grades. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring locations, the following parameters may be used in the design of new retaining walls for this site. We have provided parameters assuming the use of on-site soils for retaining wall backfill. The near-surface soils generally consist of sands, silty sands and sandy silts. Based on the results of laboratory testing, these materials are expected to possess an internal angle of friction of at least 34 degrees when compacted to 90 percent of the ASTM D-1557 maximum dry density.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

RETAINING WALL DESIGN PARAMETERS

Design Parameter		Soil Type
		On-Site Silty Sands
Internal Friction Angle (ϕ)		34°
Unit Weight		135 lbs/ft^3
Equivalent Fluid Pressure:	Active Condition (level backfill)	38 lbs/ft^3
	Active Condition (2h:1v backfill)	57 lbs/ft^3
	At-Rest Condition (level backfill)	60 lbs/ft^3

The walls should be designed using a soil-footing coefficient of friction of 0.30 and an equivalent passive pressure of 300 lbs/ft^3. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Retaining Wall Foundation Design

The retaining wall foundations should be supported within newly placed structural fill. Foundations to support new retaining walls should be designed in accordance with the general Foundation Design Parameters presented in a previous section of this report.

Seismic Lateral Earth Pressures

In accordance with the 2019 CBC, any retaining walls more than 6 feet in height must be designed for seismic lateral earth pressures. If walls 6 feet or more are required for this site, the geotechnical engineer should be contacted for supplementary seismic lateral earth pressure recommendations.

Backfill Material

On-site soils may be used to backfill the retaining walls. However, all backfill material placed within 3 feet of the back-wall face should have a particle size no greater than 3 inches. The retaining wall backfill materials should be well graded.

It is recommended that a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls, be placed against the face on the back side of the retaining walls. This material should extend from the top of the retaining wall footing to within 1 foot of the ground surface on the back side of the retaining wall. A 12-inch-thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils.

All retaining wall backfill should be placed and compacted under engineering-controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557-91). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 2-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 10-foot on-center spacing. Alternatively, 4-inch diameter holes at an approximate 20-foot on-center spacing can be used for this type of drainage system. In addition, the weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system. The actual design of this type of system should be determined by the civil engineer to verify that the drainage system possesses the adequate capacity and slope for its intended use.

Weep holes or a footing drain will not be required for building stem walls.

6.8 Pavement Design Parameters

Site preparation in the pavement area should be completed as previously recommended in the ***Site Grading Recommendations*** section of this report. The subsequent pavement recommendations assume proper drainage and construction monitoring, and are based on either PCA or CALTRANS design parameters for a twenty (20) year design period. However, these designs also assume a routine pavement maintenance program to obtain the anticipated 20-year pavement service life.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The on-site soils generally consist of sands, silty sands and sandy silts. Based on their classification, these materials are expected to possess good to excellent pavement support characteristics, with R-values in the range of 40 to 50. Since R-value testing was not included in the scope of services for this project, the subsequent pavement design is based upon an assumed R-value of 40. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering-controlled conditions. It is recommended that R-value testing be performed after completion of rough grading to verify that the pavement design recommendations presented herein are valid.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20-year design life, assuming six operational traffic days per week.

Traffic Index	No. of Heavy Trucks per Day
4.0	0
5.0	1
6.0	3
7.0	11
8.0	35
9.0	93

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	4	6	7	8	10
Compacted Subgrade	12	12	12	12	12

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the Marshall maximum density, as determined by ASTM D-2726. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		TI = 7.0	TI = 8.0	TI = 9.0
PCC	5	5½	6½	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

The concrete should have a 28-day compressive strength of at least 3,000 psi. Any reinforcement within the PCC pavements should be determined by the project structural engineer. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness.

7.0 GENERAL COMMENTS

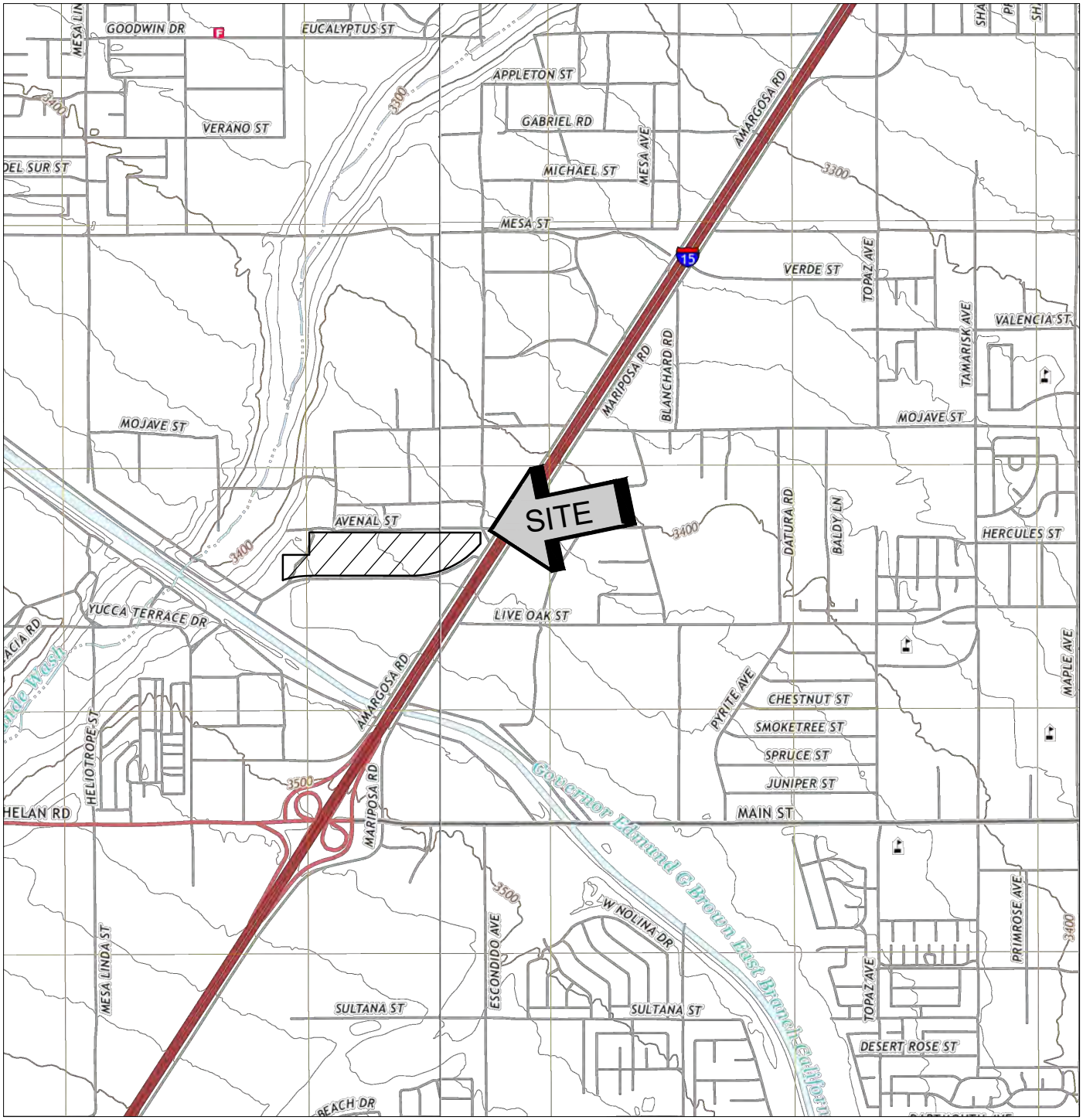
This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

APPENDIX A



SOURCE: USGS TOPOGRAPHIC MAPS OF THE BALDY MESA QUADRANGLE AND THE HESPERIA QUADRANGLE, SAN BERNARDINO COUNTY, CALIFORNIA, 2021.

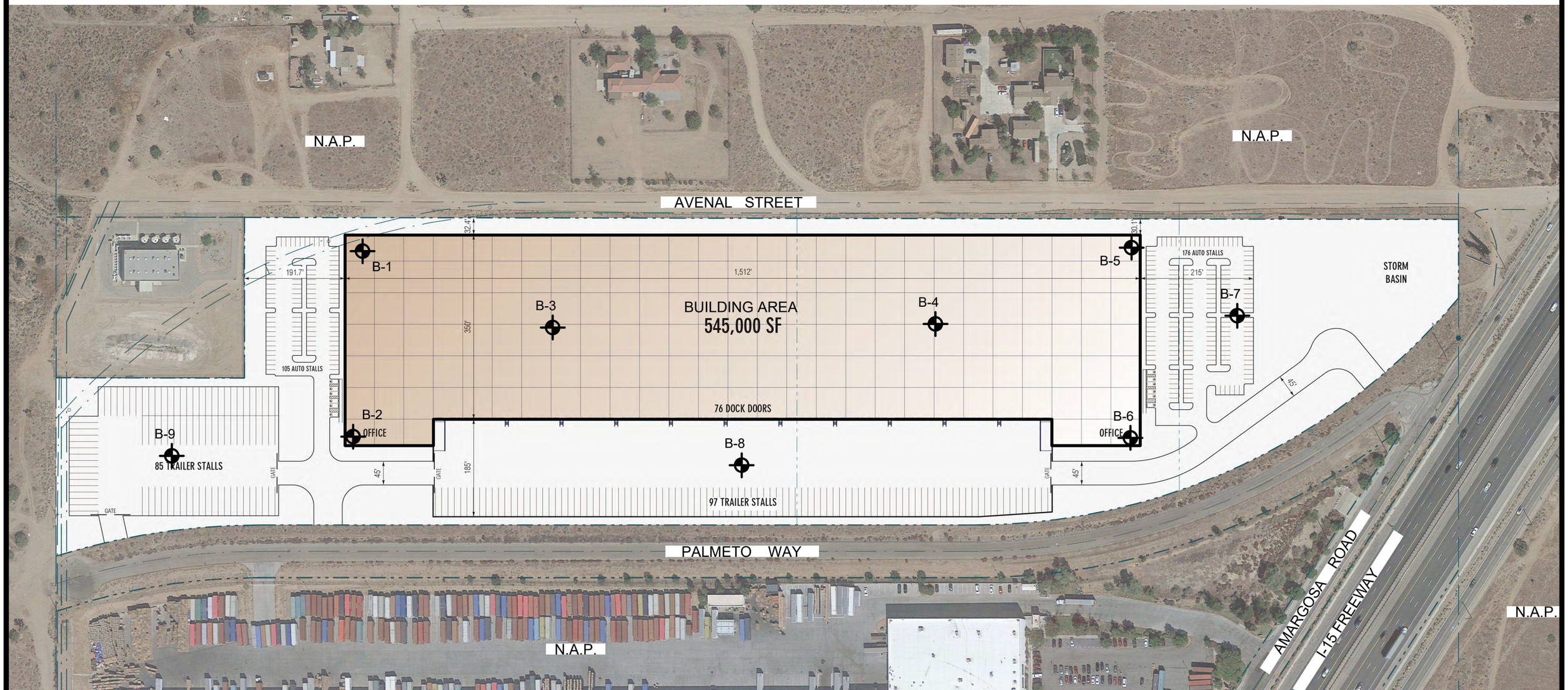
SITE LOCATION MAP

PROPOSED WAREHOUSE

HESPERIA, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: JJH CHKD: RGT	
SCG PROJECT 22G203-1	
PLATE 1	

SOUTHERN CALIFORNIA GEOTECHNICAL



GEOTECHNICAL LEGEND

APPROXIMATE BORING LOCATION

NORTH

NOTE: SITE PLAN PROVIDED BY THE CLIENT. AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH (2020).

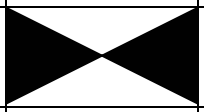
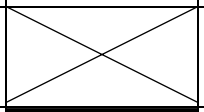
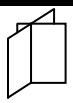
BORING LOCATION PLAN
PROPOSED WAREHOUSE
HESPERIA, CALIFORNIA

SCALE: 1" = 180'
DRAWN: OS
CHKD: RGT
SCG PROJECT 22G203-1
PLATE 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX B

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

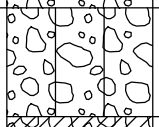
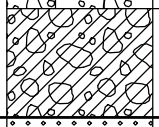
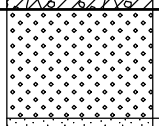
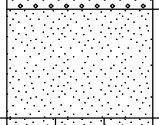
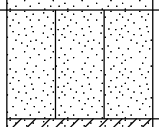
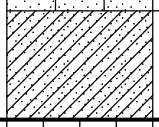
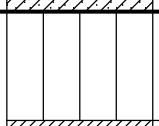
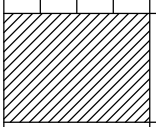
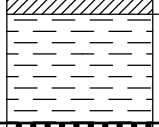
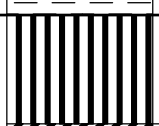
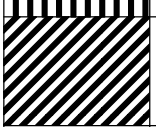
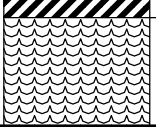
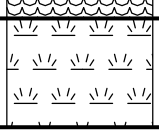
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-1

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 17 feet
READING TAKEN: At Completion

FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		12			ALLUVIUM: Brown Silty fine Sand, little medium to coarse Sand, trace fine Gravel, little fine root fibers, medium dense-dry		2					
		10			Brown Silty fine to medium Sand, little coarse Sand, little fine Gravel, medium dense-dry		2					
5		2			@ 6 feet, very loose		2					
		15			Brown fine to medium Sand, little coarse Sand, trace to little Silt, trace fine Gravel, medium dense-dry to damp		2					
10												
		17					2					
15												
		62			Brown Silty fine Sand to fine Sandy Silt, little Clay, little medium to coarse Sand, trace fine Gravel, very dense-damp		4					
20												
		52			Gray Brown Clayey fine Sand, trace to little medium to coarse Sand, trace fine Gravel, very dense-damp		6					
25					Boring Terminated at 25'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-2

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 13 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		37			ALLUVIUM: Light Brown Silty fine Sand, trace medium to coarse Sand, trace fine root fibers, medium dense-dry	120	1					
		50/5"			Light Brown Silty fine Sand to fine Sandy Silt, little medium Sand, very dense-dry	112	1					
5		45			Brown fine to coarse Sand, trace Silt, trace fine Gravel, medium dense to dense-damp	111	2					
		29					2					@ 7 feet, Disturbed Sample
		23			Brown Silty fine to medium Sand, trace coarse Sand, medium dense-dry	100	1					
10												
		27					2					
15												
		90	4.5		Brown Silty Clay, trace fine to medium Sand, little Calcareous nodules, hard-damp		6					
20					Boring Terminated at 20'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG **PLATE B-2**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-3

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 8 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		17			FILL: Brown Silty fine Sand to fine Sandy Silt, little medium to coarse Sand, trace fine Gravel, trace fine root fibers, medium dense-dry	109	2					
		28				112	1					
5		22			ALLUVIUM: Light Brown Silty fine to medium Sand, trace to little coarse Sand, trace fine Gravel, medium dense-dry	111	2					
		75/11"			@ 7 feet, very dense	111	2					
		50			Light Brown Silty fine Sand to fine Sandy Silt, little medium Sand, dense-dry	109	2					
10												
		44			Light Brown Silty fine to coarse Sand, trace fine Gravel, dense-dry		1					
15					Boring Terminated at 15'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-3

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-4

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 14 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		9			ALLUVIUM: Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel, trace fine root fibers, loose-dry		1					
		29			@ 3½ feet, little coarse Sand, trace to little fine Gravel, medium dense		2					
5		44			Brown Clayey fine to medium Sand, little coarse Sand, trace Silt, trace fine Gravel, dense-damp		3					
		36			Brown fine to coarse Sand, little Clay, trace Silt, dense-dry		2					
10												
		35			Brown fine to coarse Sand, little Silt, trace Clay, dense-dry to damp		2					
15												
		30					2					
20					Boring Terminated at 20'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-4

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-5

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 19 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		29			ALLUVIUM: Light Brown Silty fine Sand to fine Sandy Silt, trace medium to coarse Sand, trace fine Gravel, trace fine root fibers, medium dense-dry	117	1					EI = 0 @ 0-5 feet
		64			Brown Silty fine to medium Sand, trace Clay, trace coarse Sand, trace fine Gravel, trace Calcareous nodules, dense-damp	111	3					
5		53			@ 5 feet, little Clay	115	4					
		26			Brown fine to medium Sand, little coarse Sand, trace Clay, little Silt, trace to little fine Gravel, medium dense-dry to damp	112	3					
		54			@ 9 feet, dense	115	2					
10												
					Light Gray Brown Silty fine to coarse Sand, trace fine to coarse Gravel, dense-dry							
		39					1					
15												
					Brown fine to medium Sand, little coarse Sand, little Silt, trace fine Gravel, dense-damp							
		37					3					
20					Boring Terminated at 20'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-5

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-6

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 14.5 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		64			ALLUVIUM: Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel, trace fine root fibers, very dense-dry		2					
		31			Light Brown Silty fine to coarse Sand, trace Clay nodules, little fine Gravel, dense-dry		2					
5		25			Gray Brown fine to coarse Sand, little Silt, little fine Gravel, medium dense-dry to damp		2					
		22			Brown Silty fine to medium Sand, little coarse Sand, trace Clay, medium dense-dry		2					
10												
					Light Brown Silty fine Sand, little medium to coarse Sand, dense-dry							
		30					2					
15												
					Light Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace coarse Sand, trace fine Gravel, dense-dry to damp							
		33					3					
20												
		34					2					
25					Boring Terminated at 25'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-6

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-7

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 5.5 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		20			ALLUVIUM: Brown fine to medium Sandy Silt, trace coarse Sand, medium dense-dry		2					
		33			Gray Brown Silty fine to coarse Sand, trace Clay, little fine Gravel, medium dense to dense-damp		3					
5		27					3					
		33			Gray Brown fine to coarse Sand, trace Silt, little to some fine Gravel, dense-dry		1					
10					Boring Terminated at 10'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG **PLATE B-7**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-8

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 4.5 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		55			ALLUVIUM: Light Gray Brown Silty fine to medium Sand, trace coarse Sand, trace to little Clay, dense to very dense-damp		3					
		43					3					
5												
		31			Light Brown Silty fine to medium Sand, trace to little coarse Sand, trace fine Gravel, medium dense to dense-dry to damp		3					
		25					1					
10					Boring Terminated at 10'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG **PLATE B-8**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-9

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 4 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		10			ALLUVIUM: Light Brown fine Sandy Silt, trace medium Sand, trace fine root fibers, medium dense-dry		1					
		11			Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel, medium dense-dry		1					
5		21			@ 6 feet, little coarse Sand		1					
		36			Light Brown fine Sandy Silt, little medium to coarse Sand, dense-damp		3					
10					Boring Terminated at 10'							

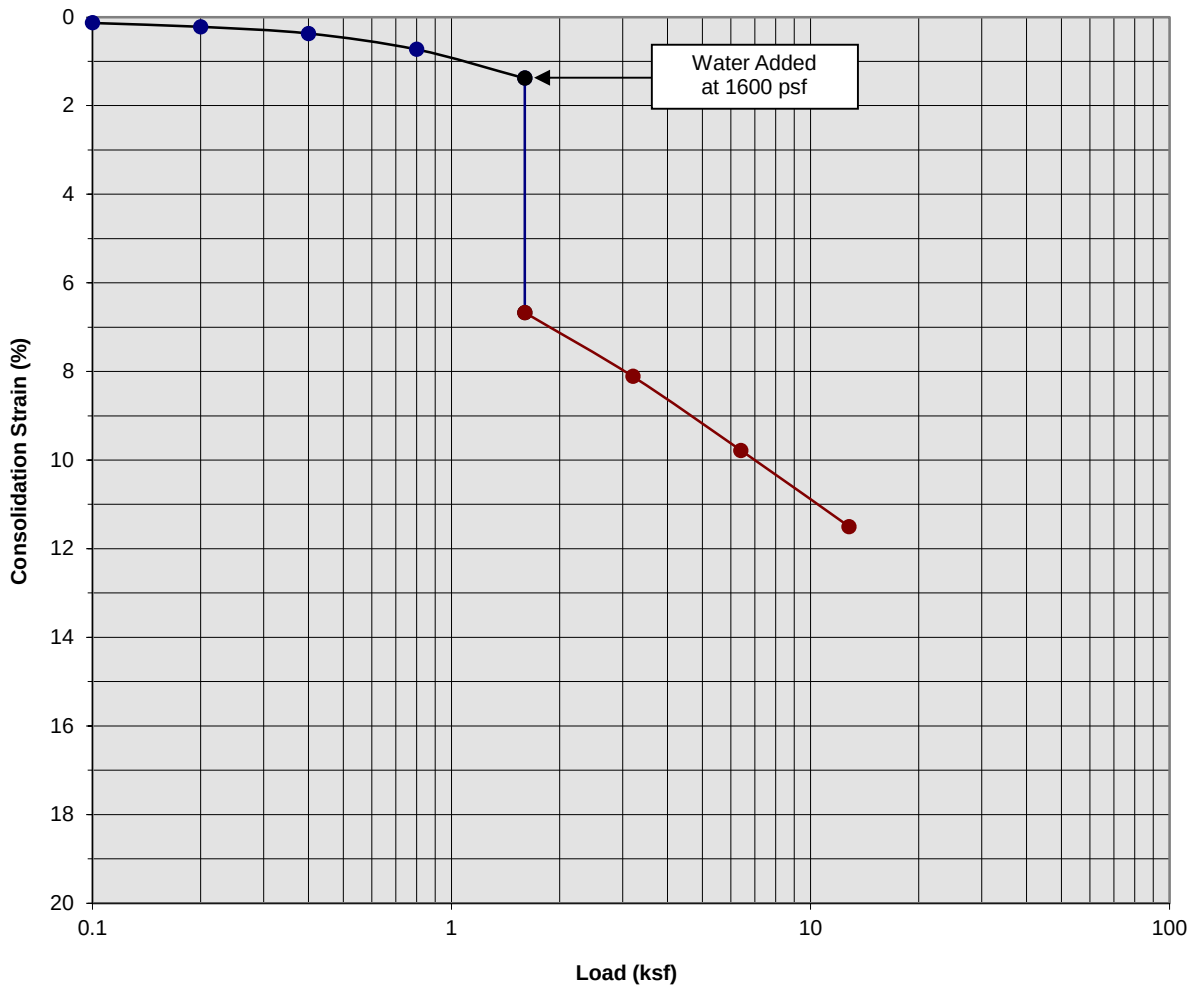
TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-9

APPENDIX C

Consolidation/Collapse Test Results



Classification: Light Brown Silty fine Sand to fine Sandy Silt, little medium Sand

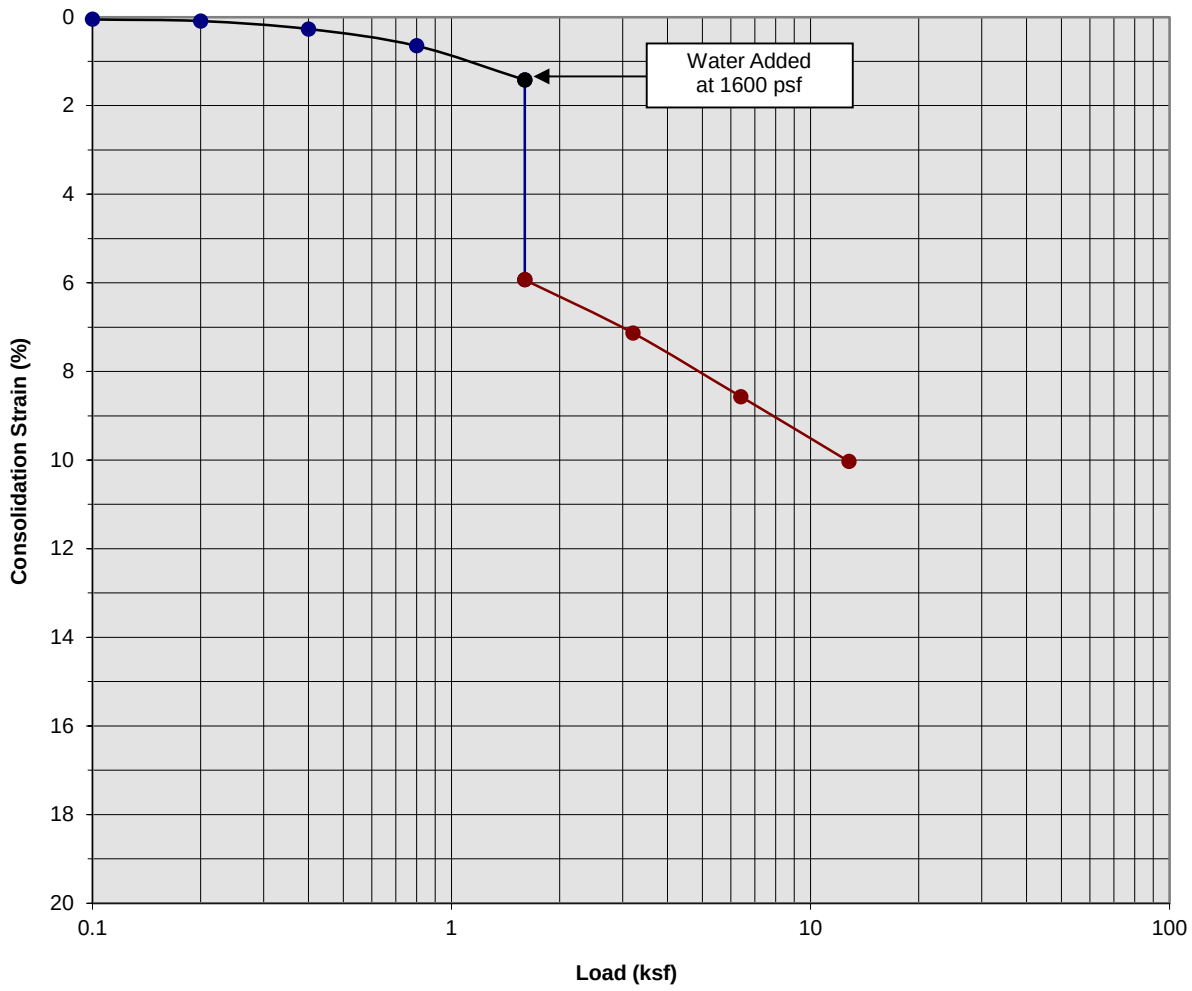
Boring Number:	B-2	Initial Moisture Content (%)	1
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	3 to 4	Initial Dry Density (pcf)	110.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	124.5
Specimen Thickness (in)	1.0	Percent Collapse (%)	5.29

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to coarse Sand, trace Silt, trace fine Gravel

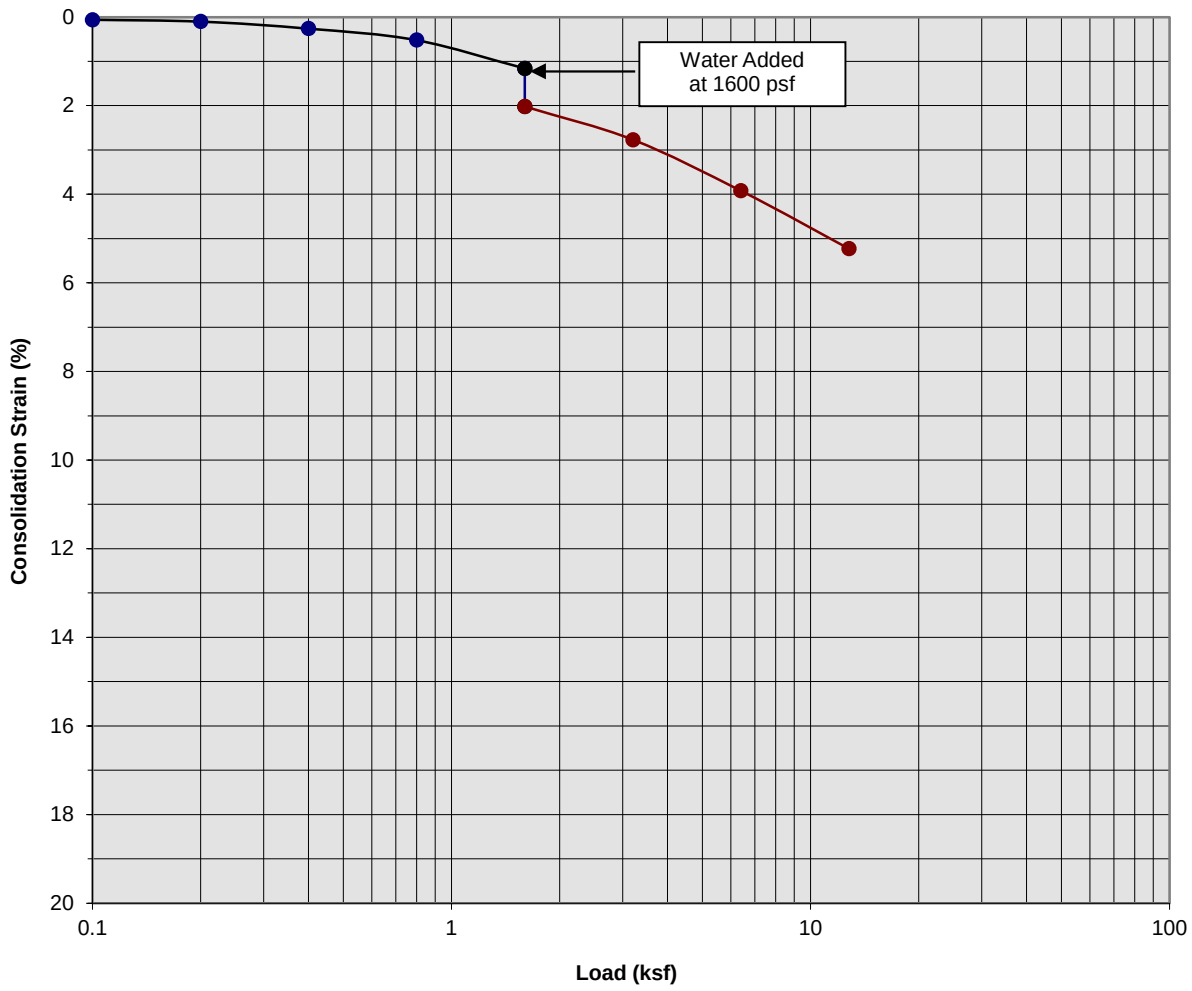
Boring Number:	B-2	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	14
Depth (ft)	5 to 6	Initial Dry Density (pcf)	110.8
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	122.5
Specimen Thickness (in)	1.0	Percent Collapse (%)	4.51

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to medium Sand, trace coarse Sand

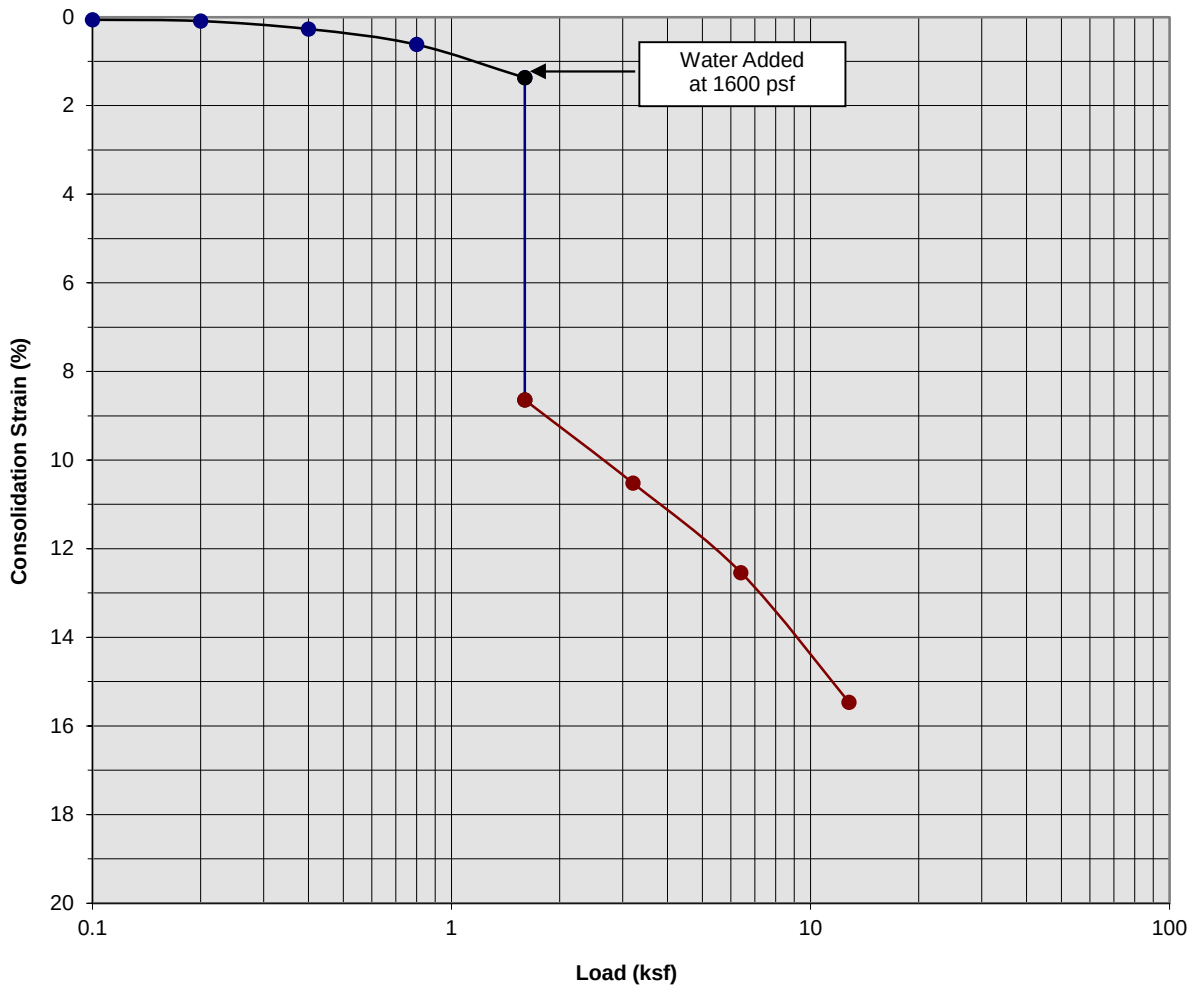
Boring Number:	B-2	Initial Moisture Content (%)	1
Sample Number:	---	Final Moisture Content (%)	17
Depth (ft)	9 to 10	Initial Dry Density (pcf)	99.8
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	104.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.86

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to medium Sand, trace Clay, trace coarse Sand

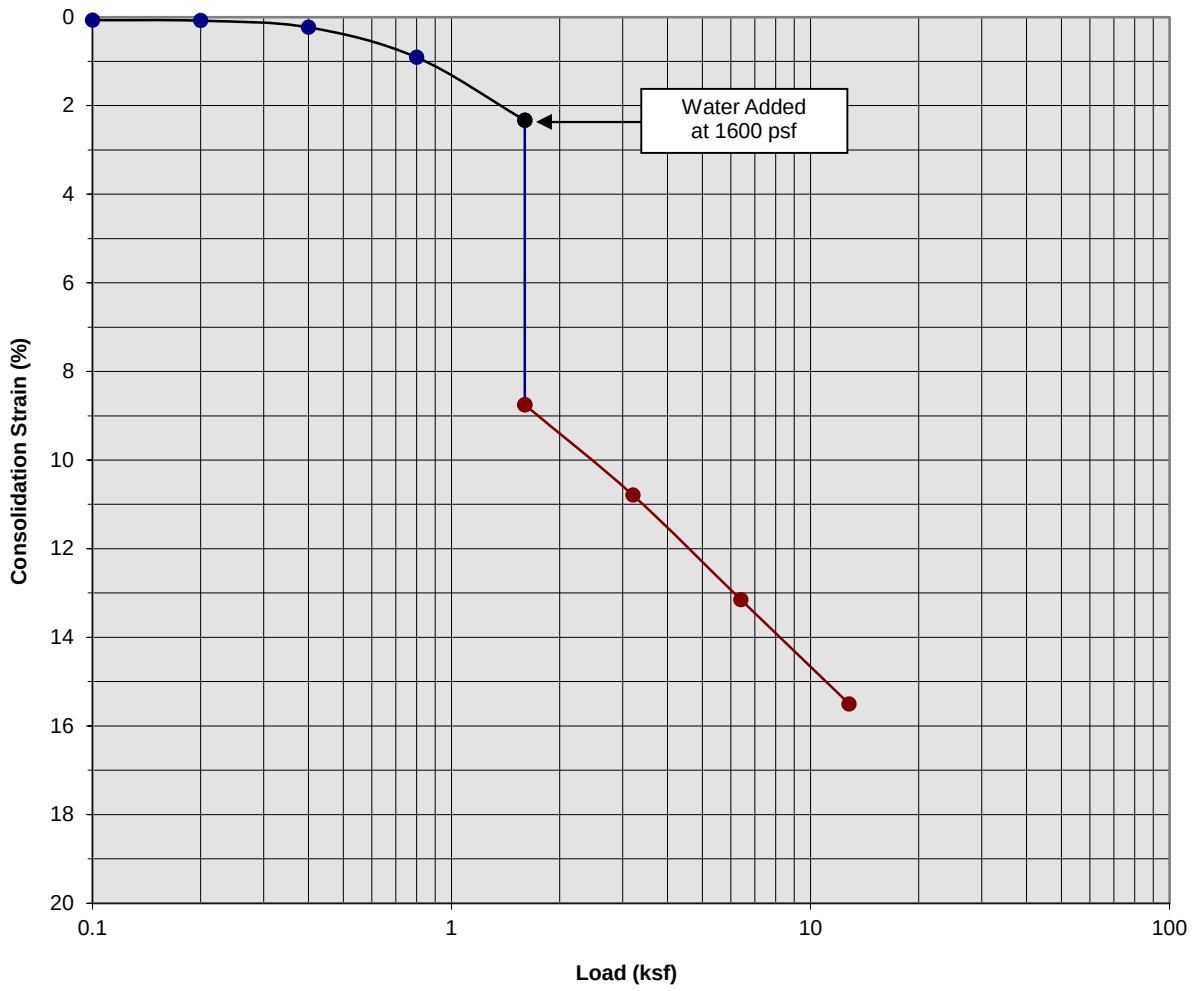
Boring Number:	B-5	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	12
Depth (ft)	3 to 4	Initial Dry Density (pcf)	111.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	130.8
Specimen Thickness (in)	1.0	Percent Collapse (%)	7.27

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to medium Sand, little Clay, trace coarse Sand

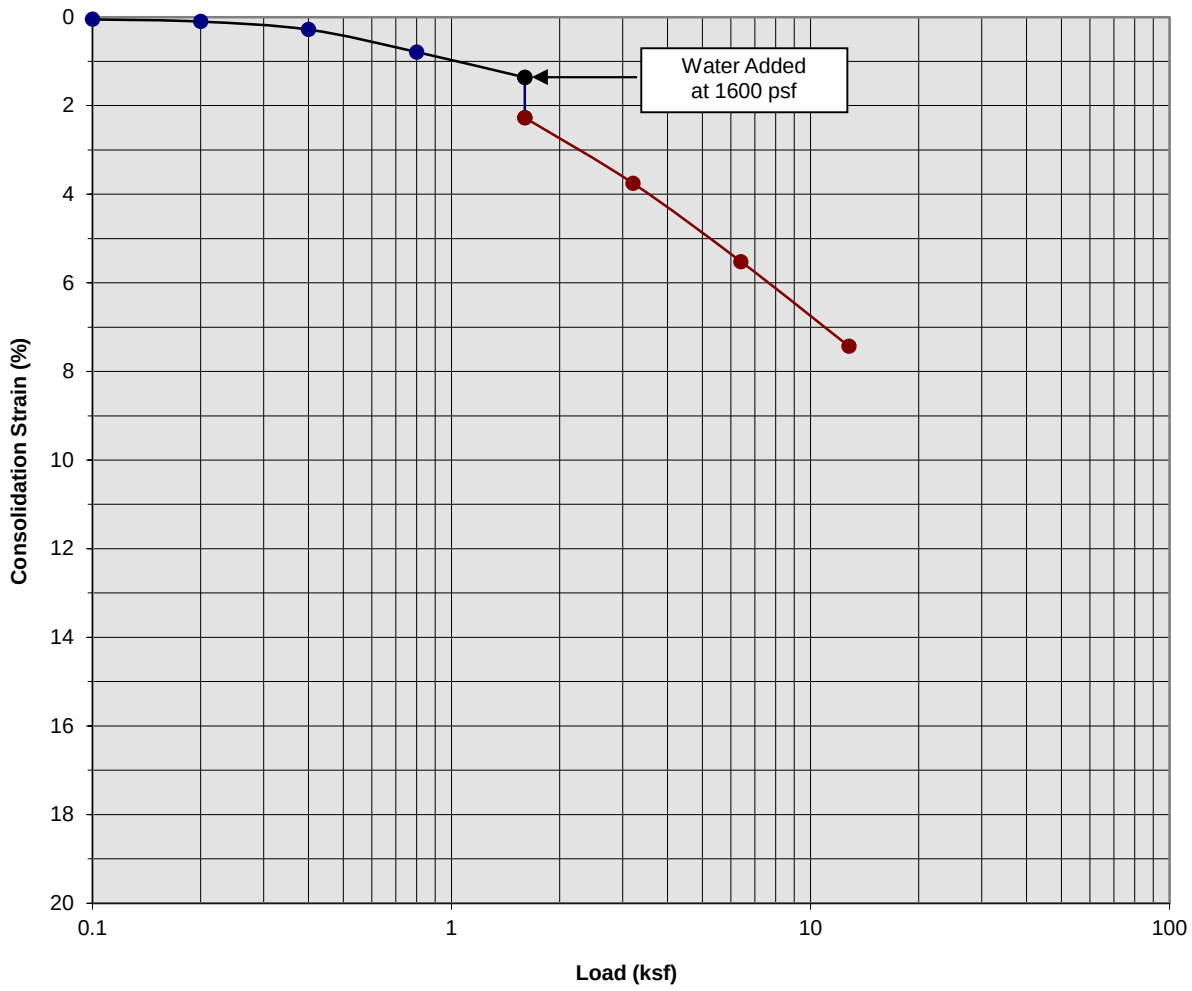
Boring Number:	B-5	Initial Moisture Content (%)	4
Sample Number:	---	Final Moisture Content (%)	12
Depth (ft)	5 to 6	Initial Dry Density (pcf)	115.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	135.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	6.42

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to medium Sand, little coarse Sand, trace Clay, little Silt

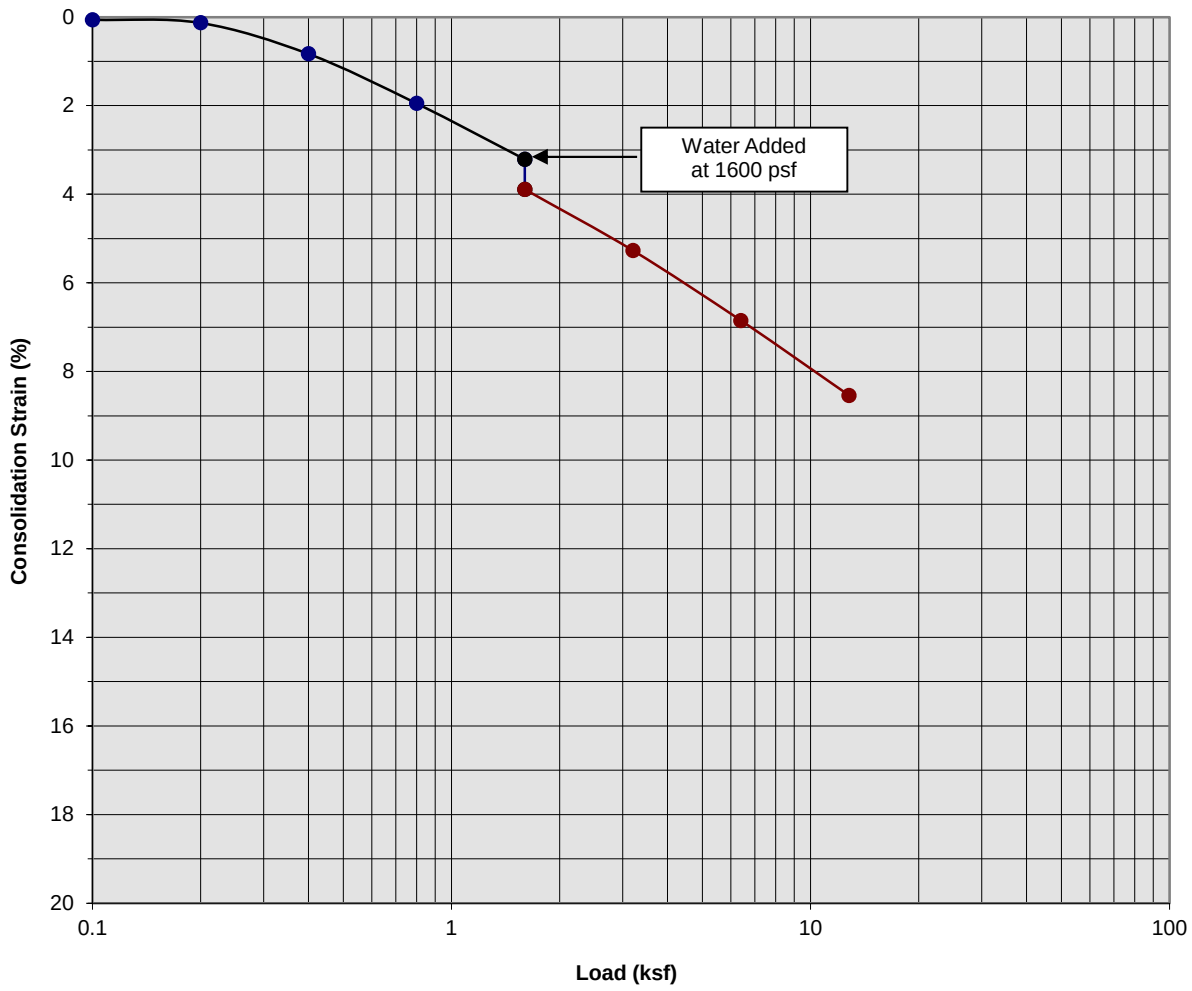
Boring Number:	B-5	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	14
Depth (ft)	7 to 8	Initial Dry Density (pcf)	112.0
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	120.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.91

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to medium Sand, little coarse Sand, trace Clay, little Silt

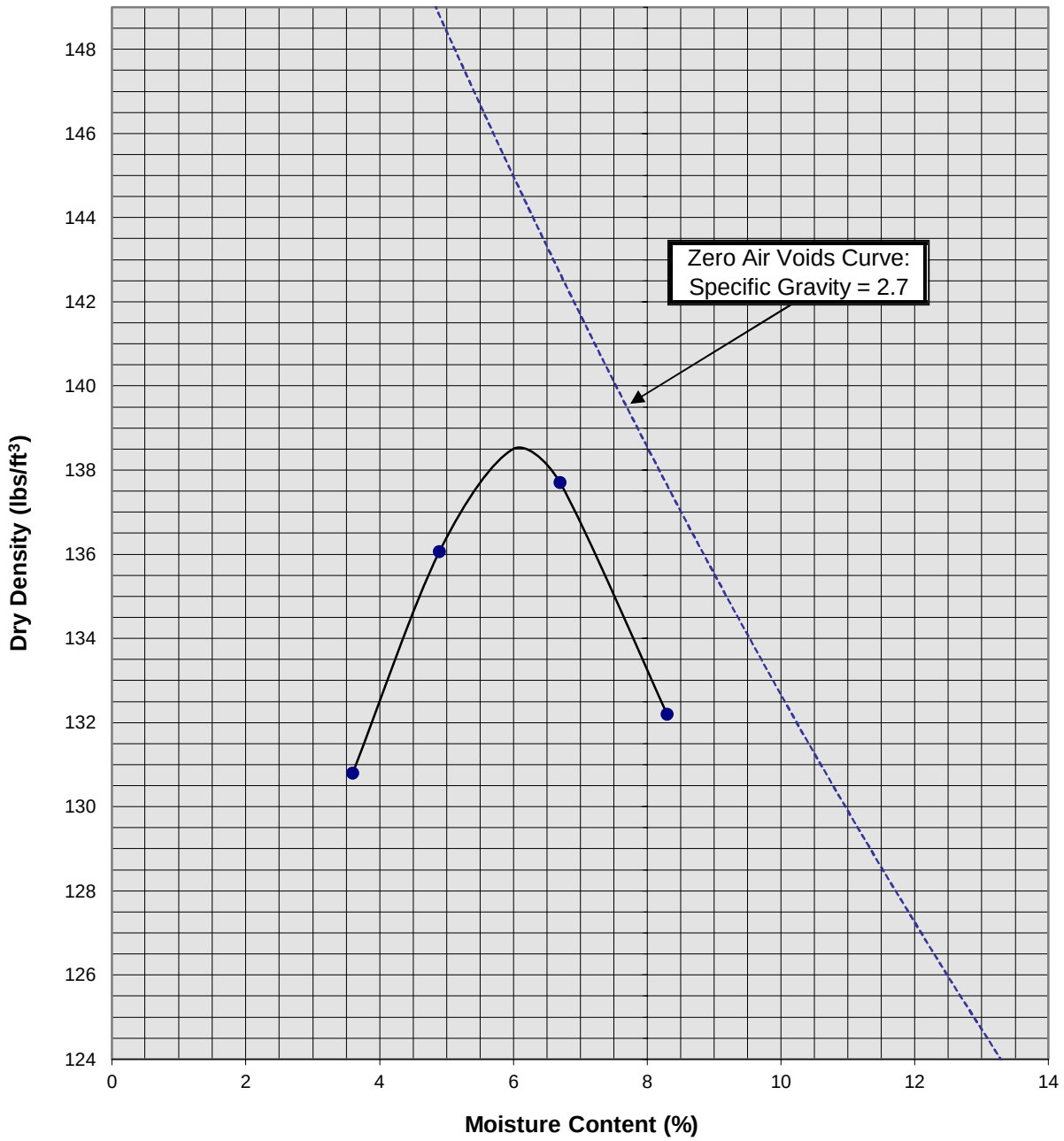
Boring Number:	B-5	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	14
Depth (ft)	9 to 10	Initial Dry Density (pcf)	114.7
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	123.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.68

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 7

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557

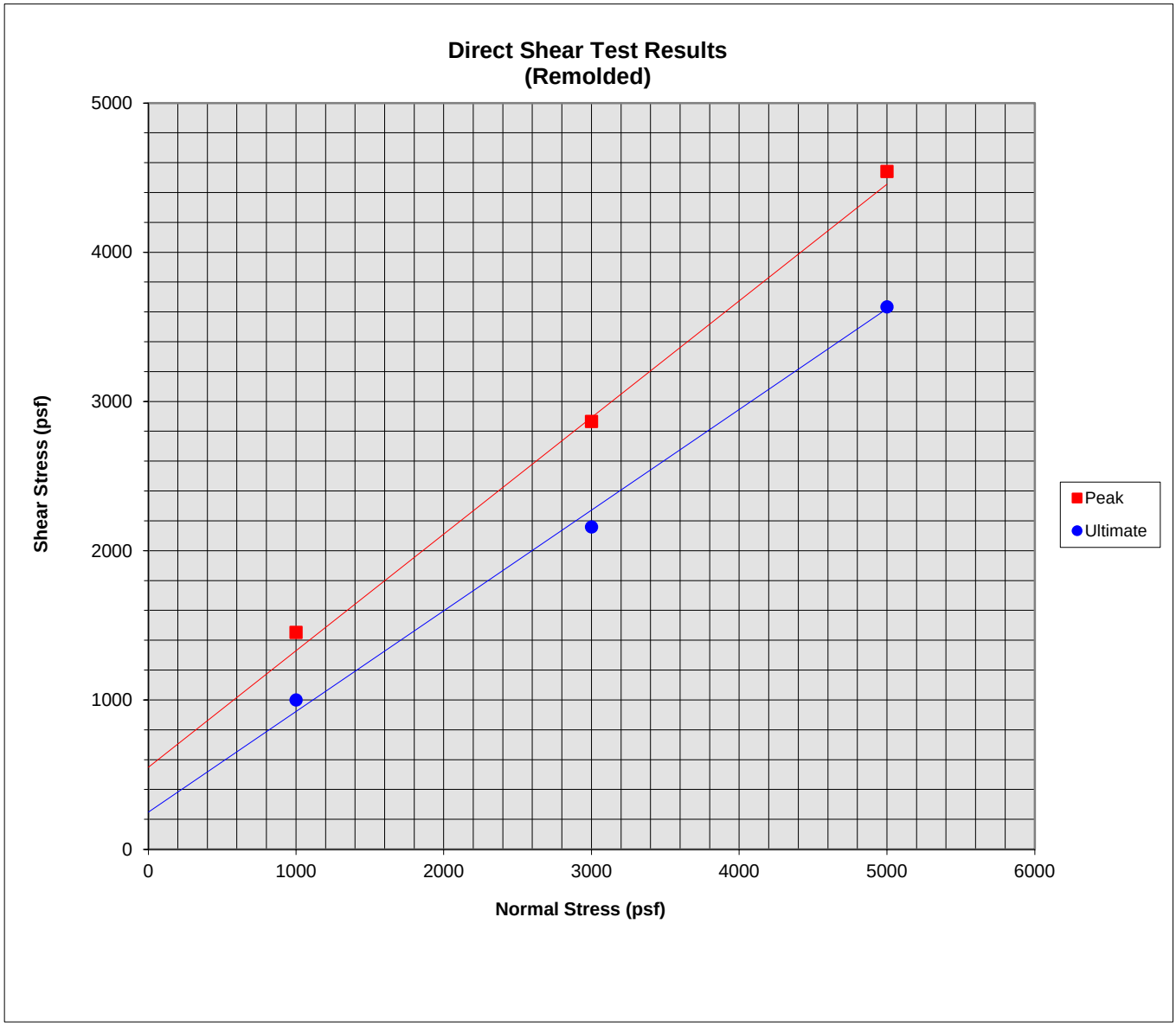


Soil ID Number	B-4 @ 0-5'
Optimum Moisture (%)	6
Maximum Dry Density (pcf)	138.5
Soil Classification	Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel

Proposed Warehouse
Hesperia, California
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PLATE C- 8

SoCalGeo
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A California Corporation



Sample Description: B-4 @ 0 to 5'

Classification: Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel

Sample Data	
Remolded Moisture Content	6.4
Final Moisture Content	12.0
Remolded Dry Density	124.7
Percent Compaction	90.0
Final Dry Density	----
Specimen Diameter (in)	2.4
Specimen Thickness (in)	1.0

Test Results	Peak	Ultimate
ϕ (°)	38.0	34.0
C (psf)	550	250

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 9

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

APPENDIX D

GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as "contaminated," and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

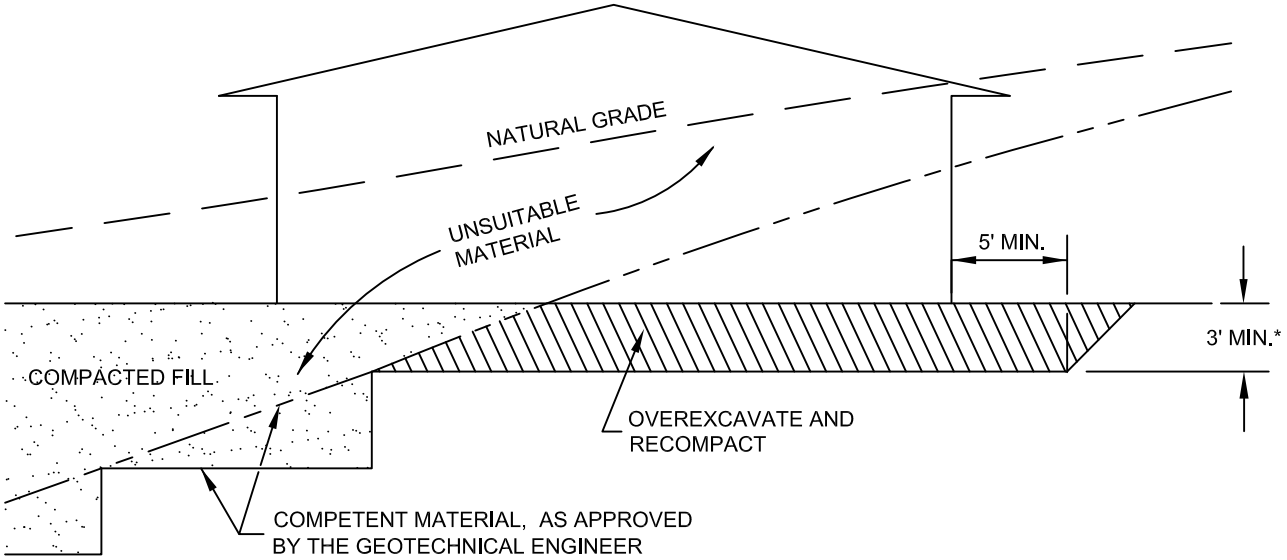
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

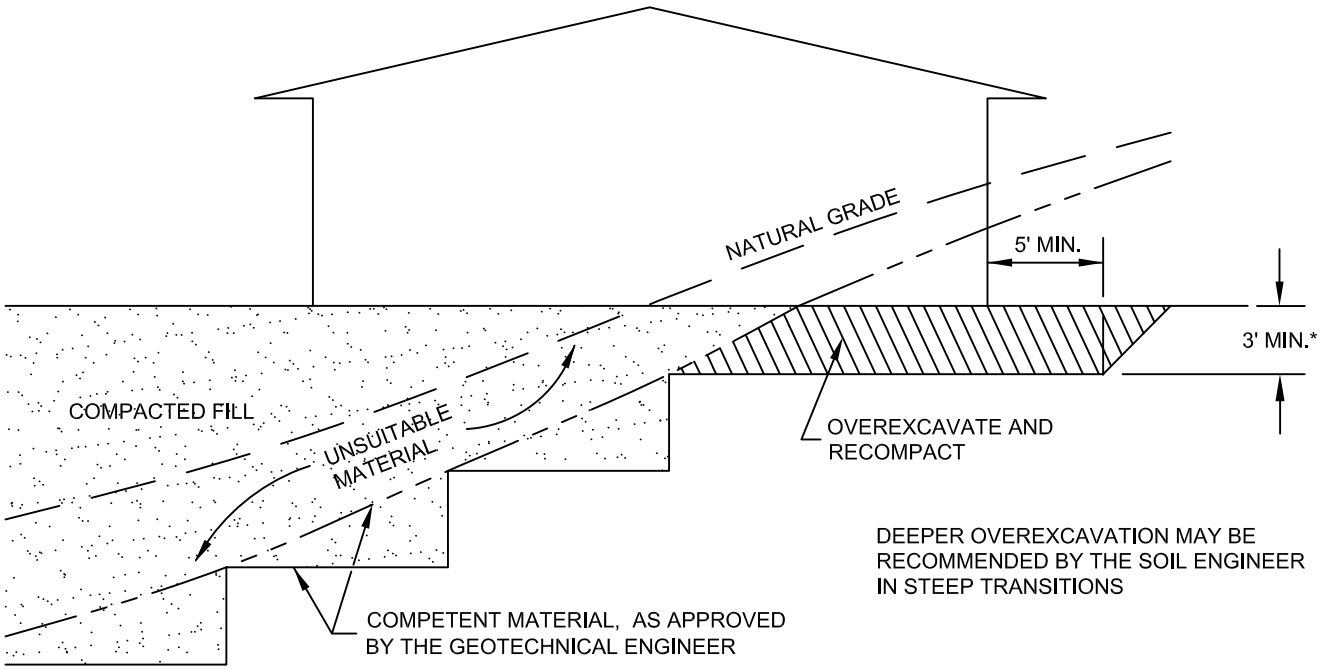
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

CUT LOT



CUT/FILL LOT (TRANSITION)



*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

TRANSITION LOT DETAIL

GRADING GUIDE SPECIFICATIONS

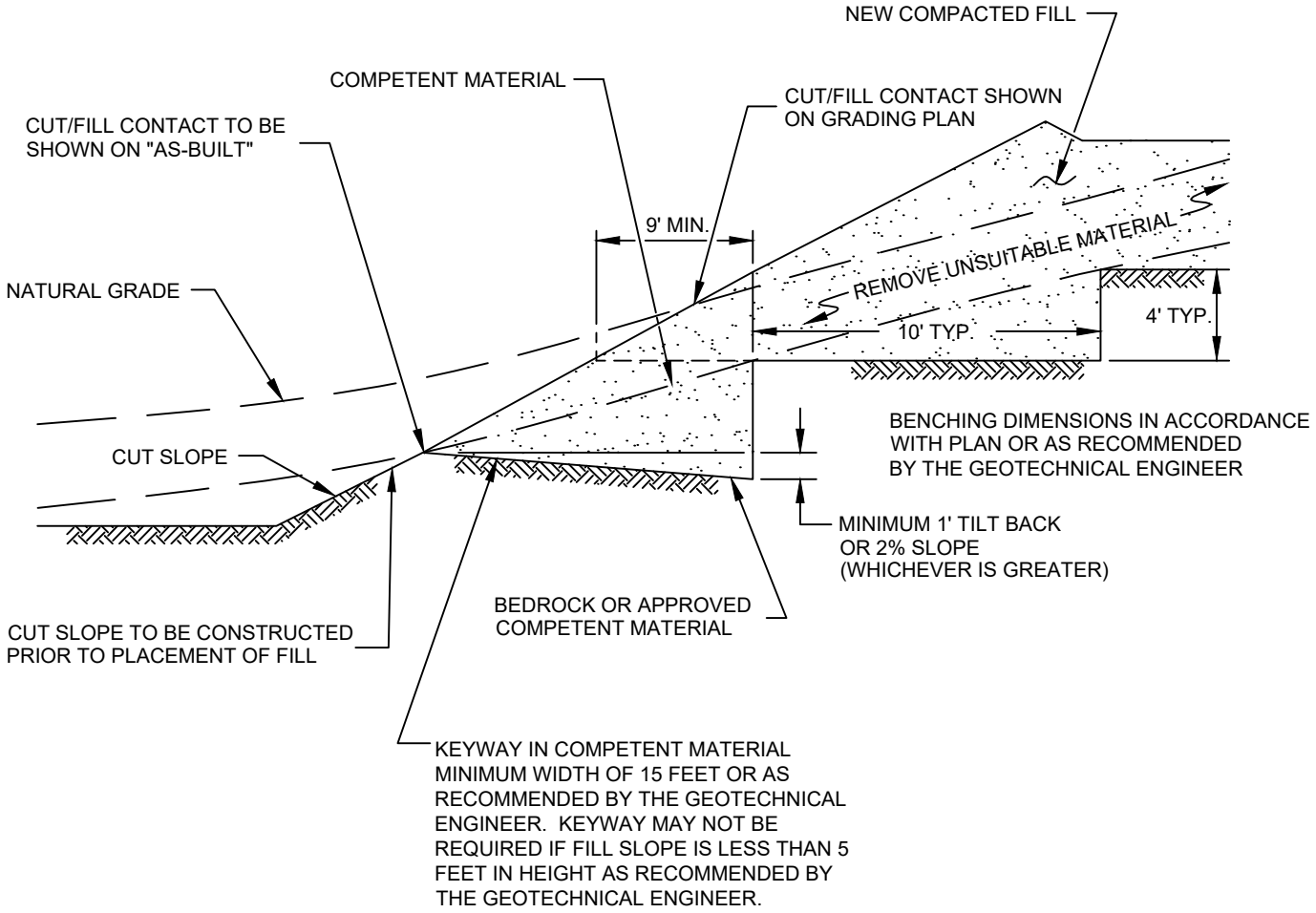
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-1

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



FILL ABOVE CUT SLOPE DETAIL

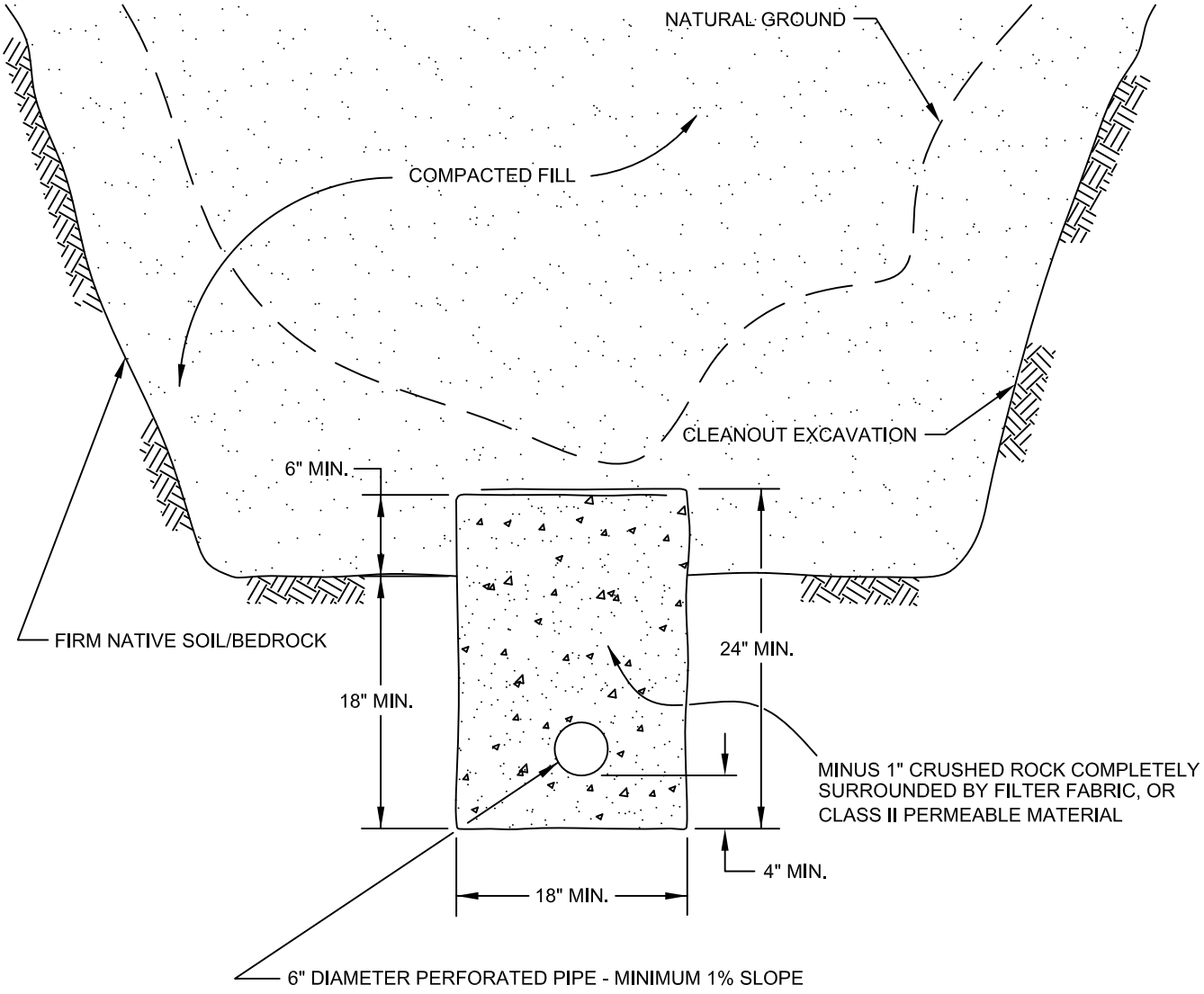
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-2

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PIPE MATERIAL	DEPTH OF FILL OVER SUBDRAIN
ADS (CORRUGATED POLETHYLENE)	8
TRANSITE UNDERDRAIN	20
PVC OR ABS: SDR 35	35
SDR 21	100

SCHEMATIC ONLY
NOT TO SCALE

CANYON SUBDRAIN DETAIL

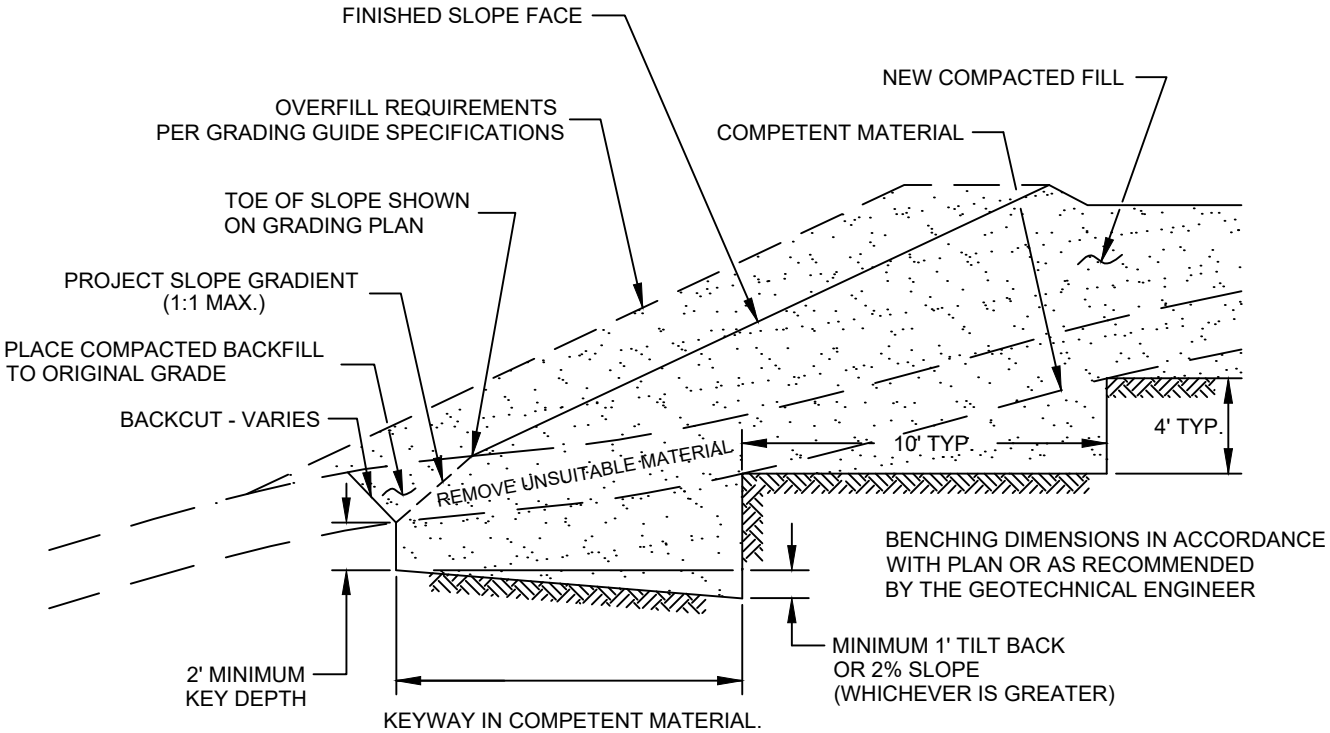
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



NOTE:
BENCHING SHALL BE REQUIRED WHEN NATURAL SLOPES ARE EQUAL TO OR STEEPER THAN 5:1 OR WHEN RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

FILL ABOVE NATURAL SLOPE DETAIL

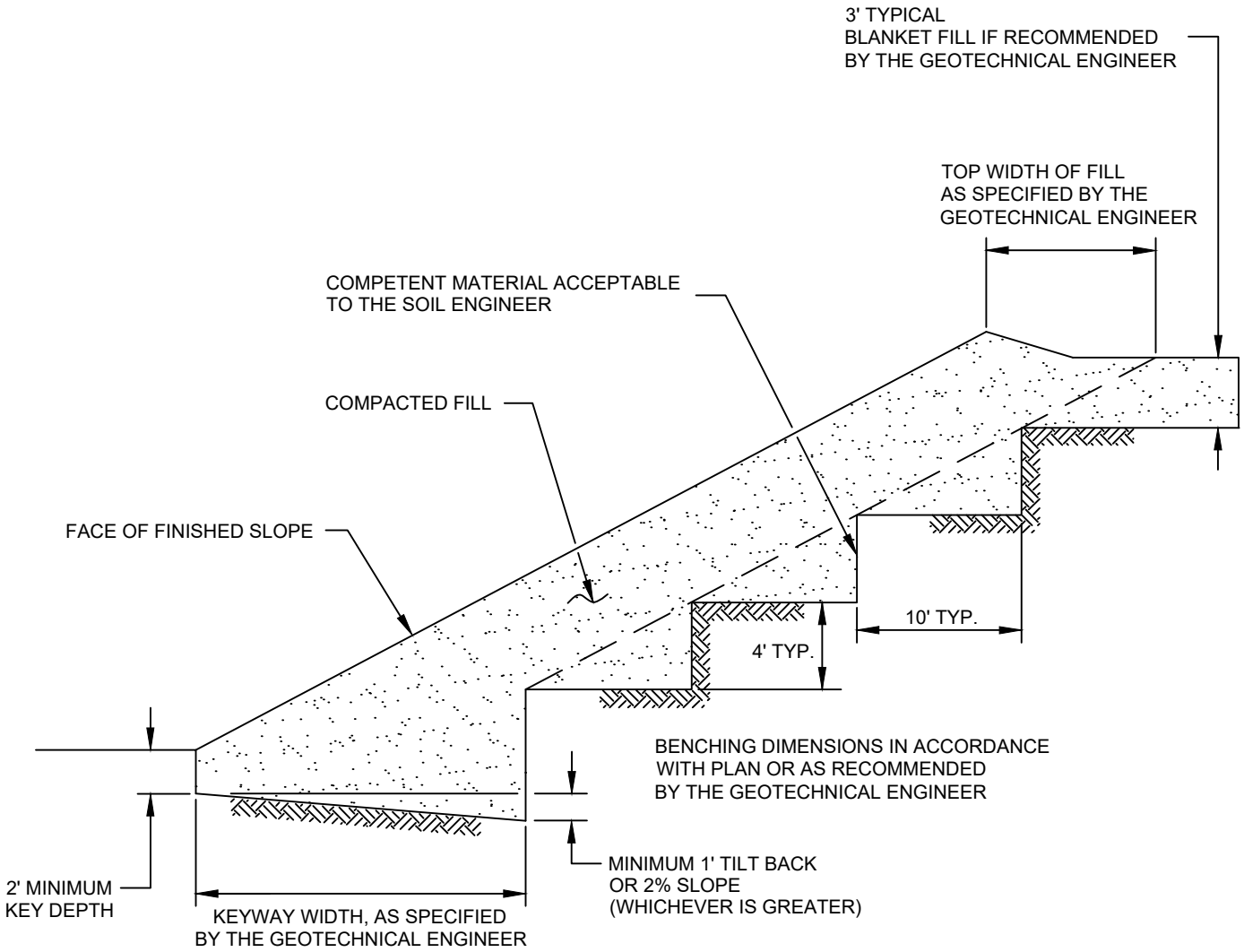
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



STABILIZATION FILL DETAIL

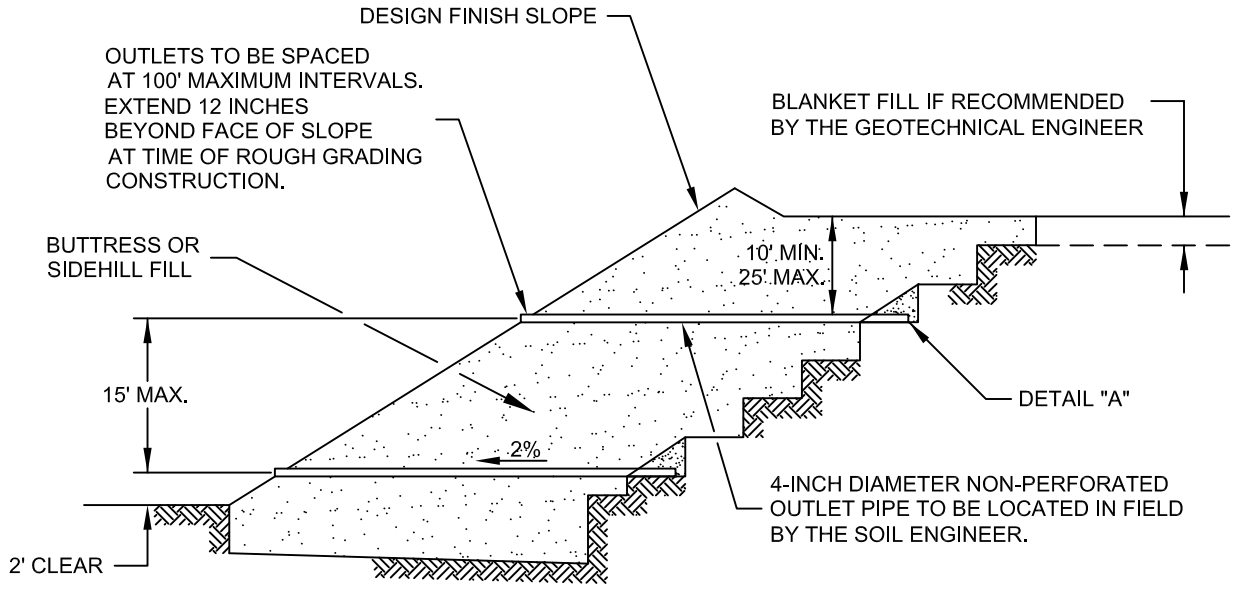
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



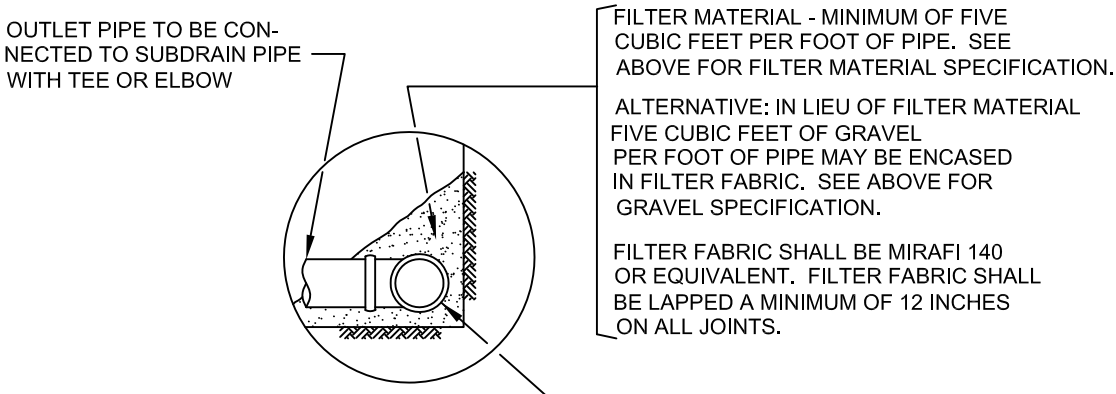
"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50



DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

SLOPE FILL SUBDRAINS

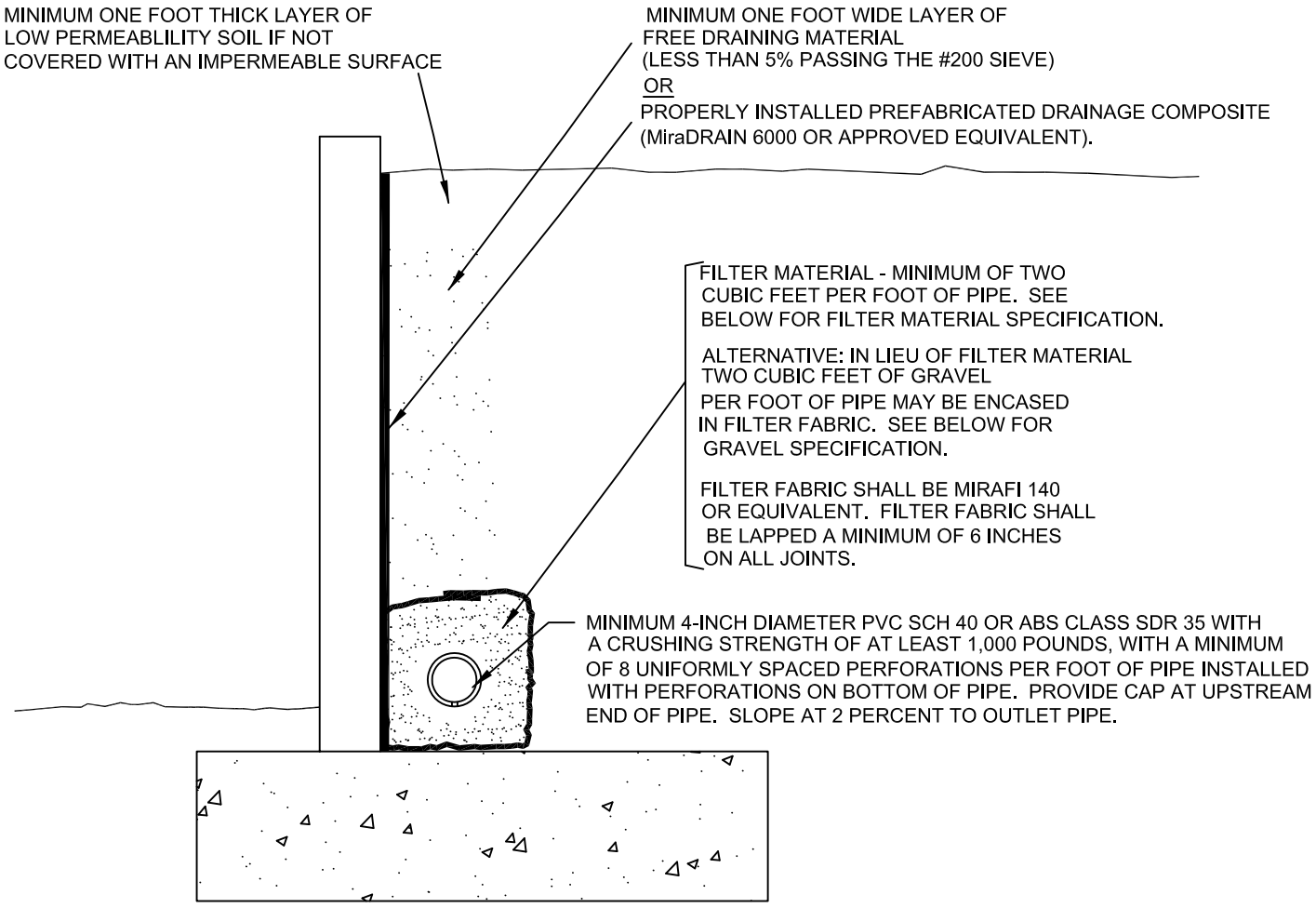
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50

RETAINING WALL BACKDRAINS

GRADING GUIDE SPECIFICATIONS

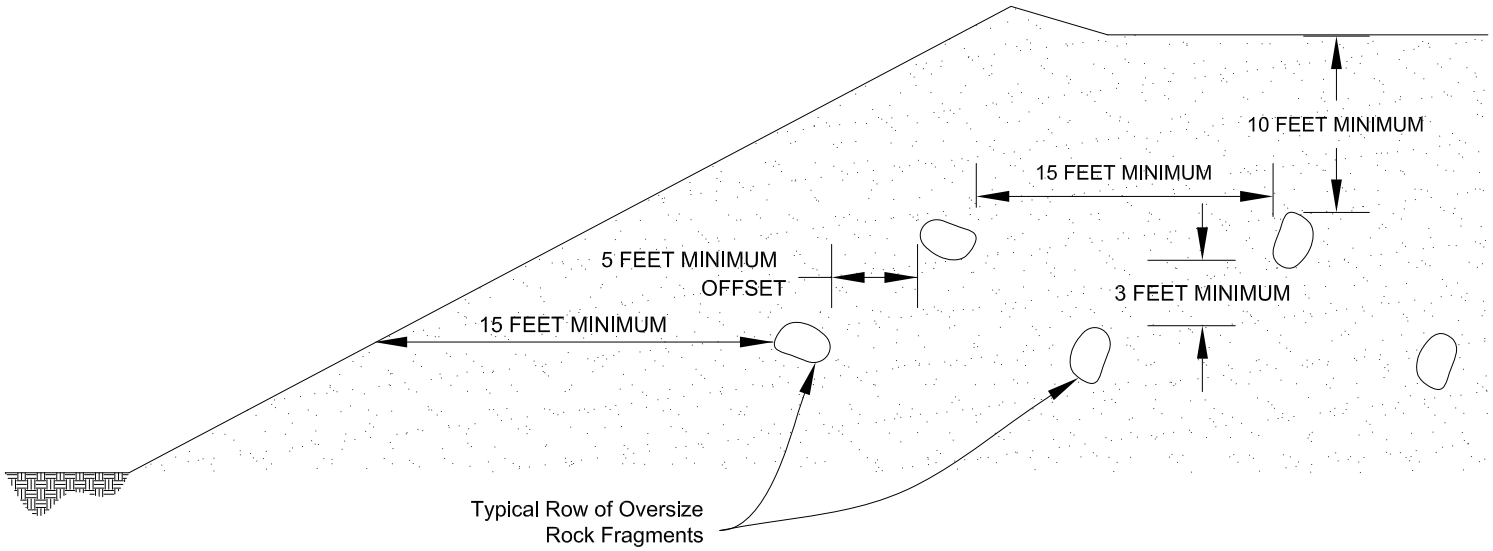
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CHKD: GKM

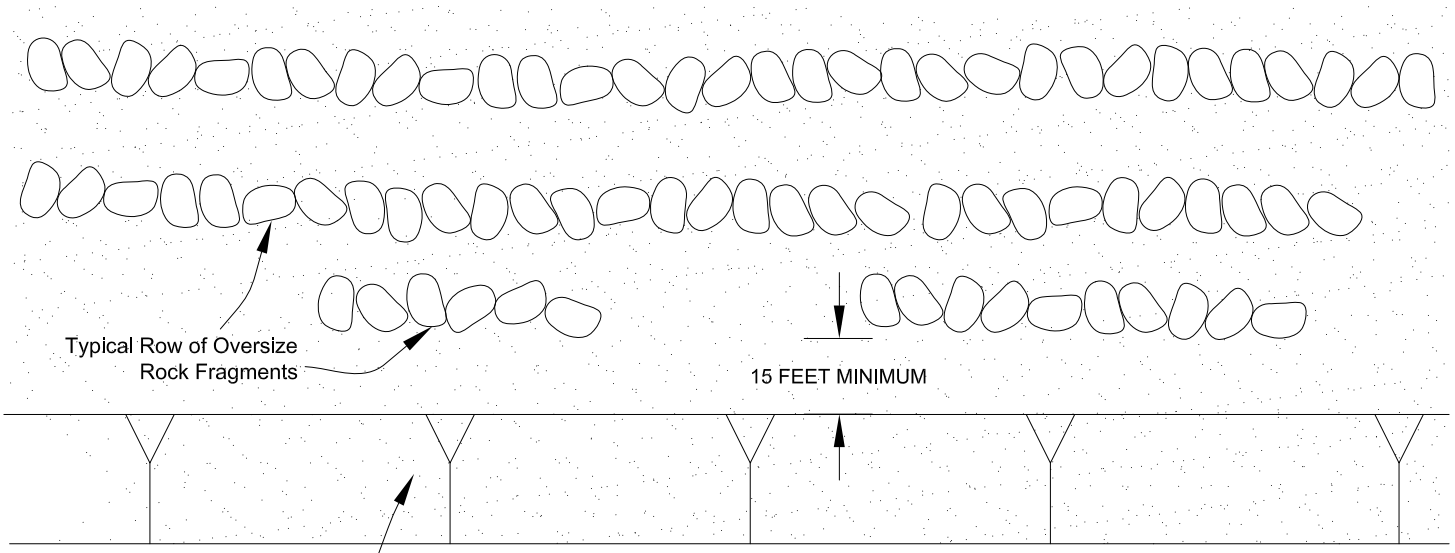
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



Section View



Plan View

PLACEMENT OF OVERSIZED MATERIAL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: PM
CHKD: GKM

PLATE D-8

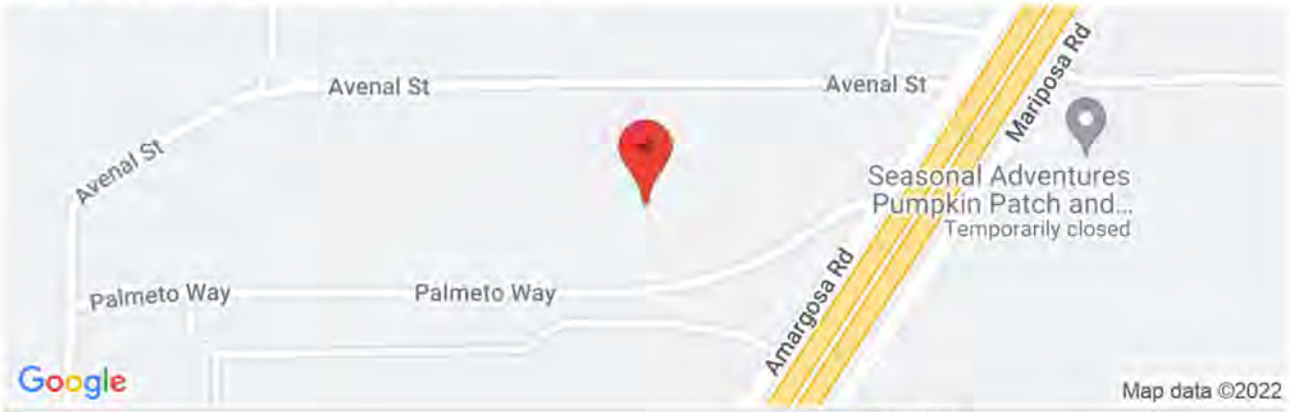
SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX E

OSHPD

Latitude, Longitude: 34.43653616, -117.37565949



Date	6/17/2022, 2:31:07 PM
Design Code Reference Document	ASCE7-16
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.466	MCE_R ground motion. (for 0.2 second period)
S_1	0.569	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.466	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	0.978	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.5	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.55	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	1.466	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.581	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.569	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.627	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.928	Mapped value of the risk coefficient at short periods
C_{R1}	0.907	Mapped value of the risk coefficient at a period of 1 s

SOURCE: SEAOC/OSHPD Seismic Design Maps Tool
<https://seismicmaps.org/>

SEISMIC DESIGN PARAMETERS - 2019 CBC

PROPOSED WAREHOUSE

HESPERIA, CALIFORNIA

DRAWN: JJH
CHKD: JJL

SCG PROJECT
22G203-1

PLATE E-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

Appendix G – Greenhouse Gas Analysis

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE

GREENHOUSE GAS ANALYSIS

Prepared By:

Haseeb Qureshi | hqureshi@urbanxroads.com
Shannon Wong | swong@urbanxroads.com

Reference Number
14848-04 GHG Report

Agency
City of Hesperia

Date
March 24, 2026

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LIST OF ABBREVIATED TERMS

%	Percent
°C	Degrees Celsius
°F	Degrees Fahrenheit
(1)	Reference
2017 Scoping Plan	*Final 2017 Scoping Plan Update*
2022 Scoping Plan	*2022 Scoping Plan*
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AB 1493	Pavley Fuel Efficiency Standards
AB 1881	California Water Conservation Landscaping Act of 2006
Annex I	Industrialized Nations
AQIA	*Amargosa and Palmetto High-Cube Warehouse*Air Quality Impact Analysis
BAU	Business as Usual
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
$C_2H_2F_4$	Tetrafluroethane
$C_2H_4F_2$	Ethylidene Fluoride
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CEQA Guidelines	*CEQA Statute and Guidelines*
CDFA	California Department of Food and Agriculture
CF_4	Tetrafluoromethane
CFC	Chlorofluorocarbons
CFC-113	Trichlorotrifluoroethane
CH_4	Methane
CNRA	California Natural Resources Agency
CNRA 2009	*2009 California Climate Adaptation Strategy*
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Convention	United Nation's Framework Convention on Climate Change
COP	Conference of the Parties
City	City of Hesperia

CPUC	California Public Utilities Commission
DWR	Department of Water Resources
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
EV	Electric Vehicle
GCC	Global Climate Change
Gg	Gigagram
GHGA	Greenhouse Gas Analysis
gpd	Gallons Per Day
gpm	Gallons Per Minute
GWP	Global Warming Potential
H_2O	Water
HEPA	High Efficiency Particulate Air
HFC	Hydrofluorocarbons
HFC-23	Fluoroform
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	1,1-difluoroethane
hp	Horsepower
IPCC	Intergovernmental Panel on Climate Change
ISO	Independent System Operator
ITE	Institute of Transportation Engineers
kWh	Kilowatt Hours
lbs	Pounds
LBNL	Lawrence Berkeley National Laboratory
LCD	Liquid Crystal Display
LCFS	Low Carbon Fuel Standard or Executive Order S-01-07
LEV III	Low-Emission Vehicle
LULUCF	Land-Use, Land-Use Change and Forestry
MCY	Motorcycles
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
mpg	Miles Per Gallon
MPOs	Metropolitan Planning Organizations
$MMTCO_2e/yr$	Million Metric Ton of Carbon Dioxide Equivalent Per Year
MT/yr	Metric Tons Per Year
$MTCO_2e$	Metric Ton of Carbon Dioxide Equivalent
$MTCO_2e/yr$	Metric Ton of Carbon Dioxide Equivalent Per Year
MW	Megawatts
MWh	Megawatts Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N_2O	Nitrous Oxide
NDC	Nationally Determined Contributions
NF_3	Nitrogen Trifluoride

NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NO_X	Nitrogen Oxides
Non-Annex I	Developing Nations
OAL	Office of Administrative Law
OPR	Office of Planning and Research
PFC	Perfluorocarbons
ppb	Parts Per Billion
ppm	Parts Per Million
ppt	Parts Per Trillion
Project	Amargosa and Palmetto High-Cube Warehouse
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient Vehicles Rule
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 375	Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies
SB 1078	Renewable Portfolio Standards
SB 1368	Statewide Retail Provider Emissions Performance Standards
SCAG	Southern California Association of Governments
Scoping Plan	California Air Resources Board Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
sf	Square Feet
SF_6	Sulfur Hexaflouride
SLPS	Short-Lived Climate Pollutant Strategy
SP	Service Population
TDM	Transportation Demand Measures
Title 20	Appliance Energy Efficiency Standards
Title 24	California Building Code
U.N.	United Nations
U.S.	United States
UNFCCC	United Nations' Framework Convention on Climate Change
VICS	Voluntary Interindustry Commerce Solutions
VMT	Vehicle Miles Traveled
WCI	Western Climate Initiative
WRI	World Resources Institute
ZE/NZE	Zero and Near-Zero Emissions
ZEV	Zero-Emissions Vehicles

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this Amargosa and Palmetto High-Cube Warehouse Greenhouse Gas Analysis (GHGA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the Guidelines for Implementation of the California Environmental Quality Act (CEQA Guidelines) (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under the California Environmental Quality Act (CEQA).

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: Would the Project generate GHG emissions either directly or indirectly, that may have a significant impact on the environment?	3.6	*Potentially Significant*	*Significant and Unavoidable*
GHG Impact #2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	3.6	*Potentially Significant*	*Significant and Unavoidable*

ES.2 REGULATORY REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California, the Mojave Desert Air Quality Management District (MDAQMD), and the City of Hesperia aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill [SB] 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations [CCR]). Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10 percent (%) less by 2020 (7).
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (8).
- Renewable Portfolio Standards (RPS). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20% by 2010 and 33% by 2020. SB

350 mandated a 50% RPS by 2030. SB 100 increased the RPS requirements to 60% by 2030 with new interim targets of 44% by 2024 and 52% by 2027 (9).

- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (10).

Promulgated regulations that would affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS are accounted for in the Project's emission calculations.

ES.3 Applicable GHG Mitigation Measures

Unmitigated Project operational-source GHG emissions would exceed the applicable MDAQMD regional significance thresholds. The predominance of the Project's operational-source GHG emissions are generated by passenger cars and trucks accessing the Project. Neither the Project Applicant nor the City have regulatory authority to control tailpipe emissions, and no feasible mitigation measures beyond the measures identified herein exist that would reduce Project operational-source GHG emissions to levels that are less-than-significant. Therefore, Project operational-source GHG emissions impacts are therefore considered significant and unavoidable.

MM GHG-1

The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible:

- Only haul trucks meeting model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site.
- Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and (3) telephone numbers of the building facilities manager and CARB to report violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place.
- Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.
- The minimum number of automobile electric vehicle (EV) charging stations required by the California Code of Regulations Title 24 shall be provided. In addition, the buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future.
- Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available.

MM GHG-2

The Project shall implement the following measures in order to reduce operational energy source air pollutant emissions to the extent feasible:

- The Project shall include rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.
- Install Energy Star-rated heating, cooling, lighting, and appliances.
- Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project.
- Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.

MM GHG-3

The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible:

- Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as forklifts, handheld landscaping equipment, yard trucks, office appliances, etc.
- Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible.
- Tenants shall be in, and monitor, compliance with all current air quality regulations for on-road trucks including the CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.

MM GHG-4

Prior to the issuance of a building permit, Developer shall provide documentation to the City of Hesperia demonstrating that the Project will achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application.

ES.4 Project Design Features

Sustainable design features and operational programs would be incorporated into facilities developed pursuant to the currently-proposed Project. The Project also incorporates and expresses the following project design features and attributes promoting sustainability. Because these features/attributes are integral to the Project, and/or are regulatory requirements, they are not considered to be mitigation measures. Notwithstanding, no emission credits or reductions associated with the implementation of these project design features has been quantified in this analysis.

Water Conversation

To reduce water demands and associated energy use, the Project is required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). Prior to the issuance of building permits for

the Project, the Project Applicant shall provide building plans that include the following water conservation measures:

- Install low-water use appliances and fixtures.
- Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces.
- Implement water-sensitive urban design practices in new construction.
- Install rainwater collection systems where feasible.

Solid Waste Reduction

In order to reduce the amount of waste disposed at landfills, the Project will implement a 75% waste diversion program. Prior to the issuance of building permits for the Project, the Project Applicant shall provide building plans that include the following solid waste reduction measures:

- Provide storage areas for recyclables and green waste in new construction, and food waste storage, if a pick-up service is available.

1 INTRODUCTION

This report presents the results of the GHGA prepared by Urban Crossroads, Inc., for the proposed Amargosa and Palmetto High-Cube Warehouse Project (Project). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the Project.

1.1 SITE LOCATION

The proposed project is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,714 square high-cube fulfillment center warehouse building as shown on Exhibit 1-2. The proposed project is anticipated to be constructed and fully operational by year 2027.

It is expected that the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related emission sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, stationary and on-site cargo handling equipment. This analysis is intended to describe greenhouse gas impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

EXHIBIT 1-A: LOCATION MAP

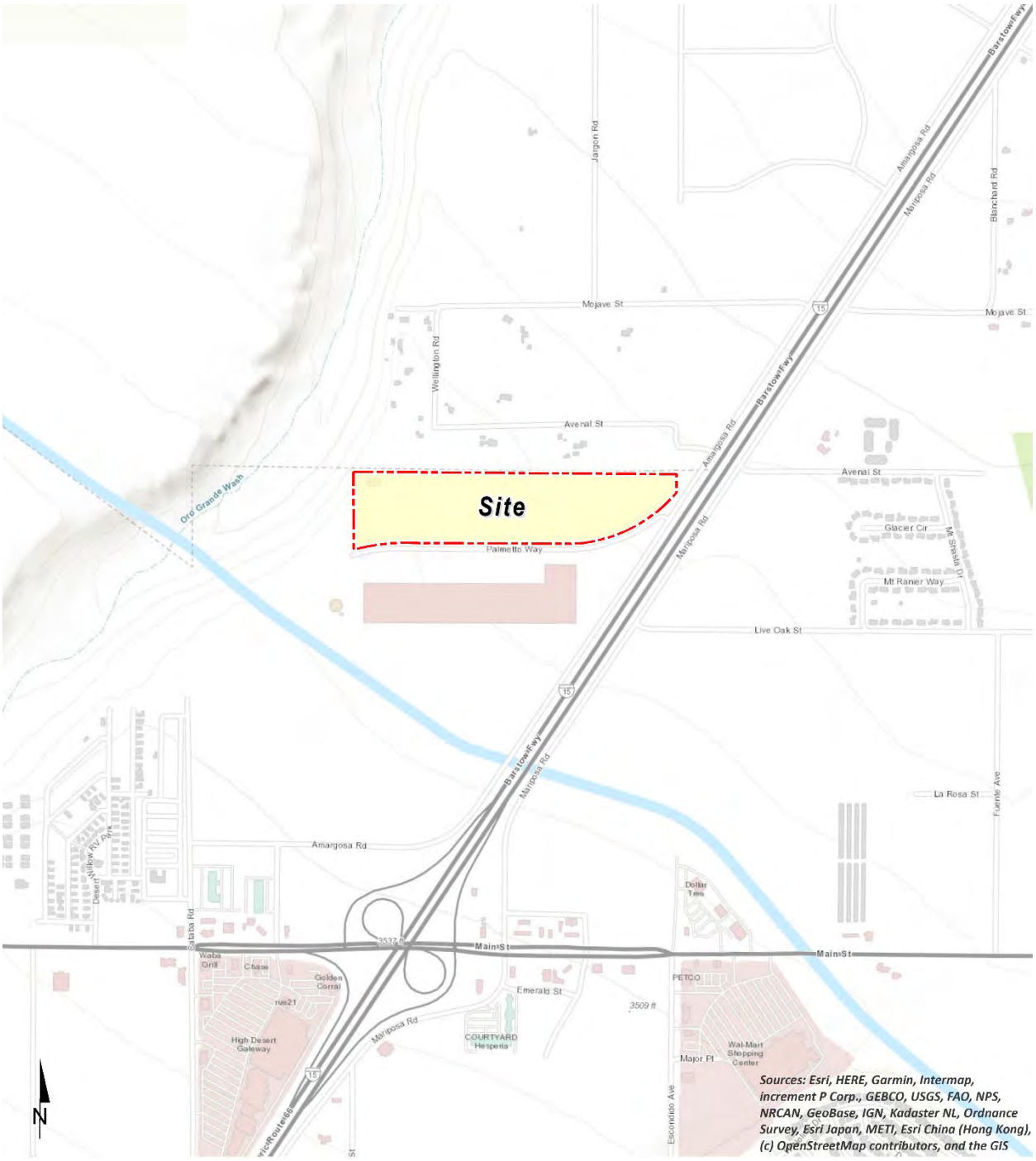
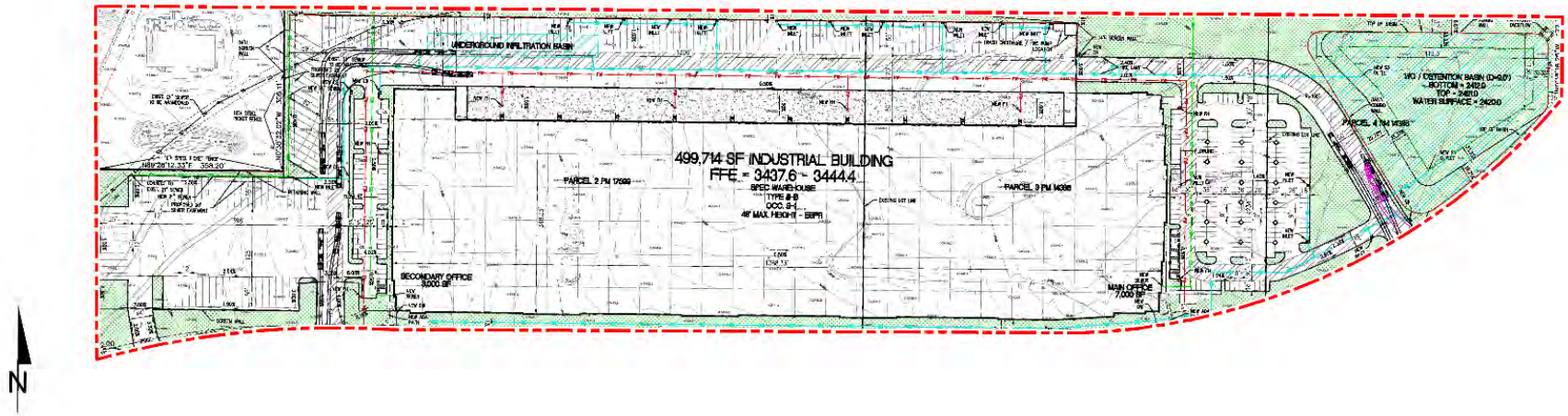


EXHIBIT 1-B: SITE PLAN



2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE (GCC)

GCC is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project, like the Project evaluated in this GHGA, cannot generate enough GHG emissions to affect a discernible change in global climate. However, the Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3 will evaluate the potential for the Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radiative heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GHGS

2.3.1 GHGs and Health Effects

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated (see Table 3-6 later in this report) because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GHGS (1 OF 6)

GHGs	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. Climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the earth, thus	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

TABLE 2-1: GHGS (2 OF 6)

GHGs	Description	Sources	Health Effects
Water (continued)	further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop would continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it would eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (11).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference

TABLE 2-1: GHGS (3 OF 6)

GHGs	Description	Sources	Health Effects
CO_2 (continued)	ppm by 2100 as a direct result of anthropogenic sources (12).	ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (13).	exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15-minute period (14).
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 in the atmosphere is generated by many different sources, such as fossil fuel production, transport and use, from the decay of organic matter in wetlands, and as a byproduct of digestion by ruminant animals such as cows. Determining which specific sources are responsible for variations in annual increases of CH_4 is complex, but scientists estimate that fossil fuel production and use contributes roughly 30% of the total CH_4 emissions. These industrial sources of CH_4 are relatively simple to pinpoint and control using current technology (15).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to elevated levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.

TABLE 2-1: GHGS (4 OF 6)

GHGs	Description	Sources	Health Effects
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (16).	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (16).
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine	CFCs have no natural source. They are found in aerosol	In confined indoor locations, working with CFC-113 or other CFCs is

TABLE 2-1: GHGS (5 OF 6)

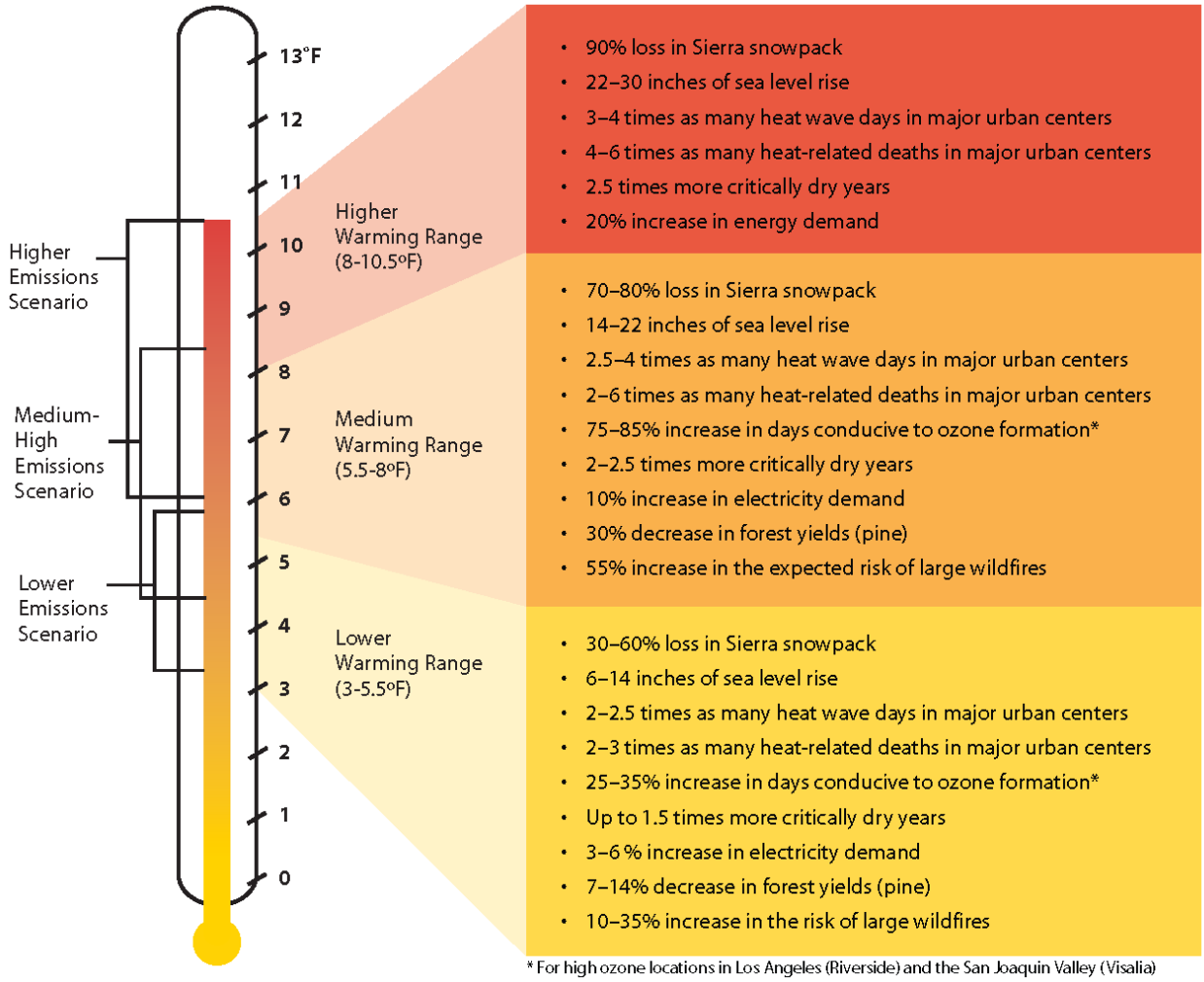
GHGs	Description	Sources	Health Effects
Chlorofluorocarbons (CFCs) (continued)	and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	sprays, blowing agents for foams and packing materials, as solvents, and as refrigerants. (17).	thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have exceptionally long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.

TABLE 2-1: GHGS (6 OF 6)

GHGs	Description	Sources	Health Effects
PFCs (continued)	atmosphere are over 70 parts per trillion (ppt).		
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (18). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200 (19).	NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (20).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects, such as the Project, are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Exhibit 2-A presents the potential impacts of global warming (21).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL (GWP)

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas causes over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the different GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The Intergovernmental Panel on Climate Change (IPCC) is the international body for assessing the science related to climate change. IPCC Assessment Reports cover the full scientific, technical, and socio-economic assessment of climate change. The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table, GWP for the 2nd Assessment Report range from 1 for CO_2 to 23,900 for SF_6 and GWP for the 6th Assessment Report range from 1 for CO_2 to 25,200 for SF_6 (22).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)	
		2nd Assessment Report	6th Assessment Report
CO_2	Multiple	1	1
CH_4	11.8	21	28
N_2O	109	310	273
HFC-23	228	11,700	14,600
HFC-134a	14	1,300	1,526
HFC-152a	1.6	140	164
SF_6	3,200	23,900	25,200

Source: IPCC Second Assessment Report, 1995 and IPCC Sixth Assessment Report, 2023

2.5 GHG EMISSIONS INVENTORIES

2.5.1 Global

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2021. Based on the latest available data, the sum of these emissions totaled approximately 28,272,940 gigagram (Gg) CO_2e[1] (23) (24) as summarized in Table 2-3.

2.5.2 United States

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2021.

2.5.3 State of California

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the U.S. emissions inventory total (16). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2024 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2022 GHG emissions period, California emitted an average 371.1 million metric tons of CO_2e per year ($MMTCO_2e/yr$) or 371,100 Gg CO_2e (5.85% of the total U.S. GHG emissions) (25). Based on data published by the U.S. Energy Information Administration, California's per capita (9.12 metric tons) GHG emissions are much less than the nationwide per capita (15.8 metric ton) average (26).

[1] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2021 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used U.N. Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF." The most recent GHG emissions for China and India are from 2014 and 2016, respectively.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION

Emitting Countries	GHG Emissions (Gg CO_2e)
China	12,300,200
United States	6,340,228
European Union (27-member countries)	3,468,394
India	2,839,425
Russian Federation	2,156,599
Japan	1,168,094
Total	28,272,940

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

2.6.1 Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. Based on *Our Changing Climate Assessing the Risks to California* by the California Climate Change Center, large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced (27).

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a significant increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

2.6.2 Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to

water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

2.6.3 Agriculture

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

2.6.4 Forests and Landscapes

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks would not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

2.6.5 Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.7 Regulatory Setting

2.7.1 International

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nation's Framework Convention on Climate Change (UNFCCC)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the UNFCCC, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

International Climate Change Treaties

The Kyoto Protocol is an international agreement linked to the UNFCCC. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the UN Climate Change Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings gradually gained consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they would "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly would not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a) (28).

Following President Biden's day-one executive order, the United States officially rejoined the landmark Paris Agreement on February 19, 2021, positioning the country to once again be part of the global climate solution. Meanwhile, city, state, business, and civic leaders across the country and around the world have been ramping up efforts to drive the clean energy advances needed to meet the goals of the agreement and put the brakes on dangerous climate change.

2.7.2 National

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the U.S. Supreme Court found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings (29).

Clean Vehicles

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA, and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). In August 2012, the EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025. The new standards apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level

of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposed engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposed separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17%, respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10% reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which declared that the MY (Model Year) 2022-2025 GHG standards are not appropriate and should be revised (30). This Final Determination serves to initiate a notice to further consider appropriate standards for MY 2022-2025 light-duty vehicles. On August 2, 2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend existing Corporate Average Fuel Economy (CAFE) and tailpipe CO_2 standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO_2 emissions standards by 1.5% each year through model year 2026 (31). On December 21, 2021, after reviewing all the public comments submitted on NHTSA's April 2021 Notice of Proposed Rulemaking, NHTSA finalizes the CAFE Preemption rulemaking to withdraw its portions of the so-called SAFE I Rule. The final rule concludes that the SAFE I Rule overstepped the agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. The final rule ensures that the SAFE I Rule will no longer form an improper barrier to states exploring creative solutions to address their local communities' environmental and public health challenges (32).

On March 31, 2022, NHTSA finalized CAFE standards for MY 2024-2026. The standards for passenger cars and light trucks for MYs 2024-2025 were increased at a rate of 8% per year and then increased at a rate of 10% per year for MY 2026 vehicles. NHTSA currently projects that the revised standards would require an industry fleet-wide average of roughly 49 mpg in MY 2026 and would reduce average fuel outlays over the lifetimes of affected vehicles that provide consumers hundreds of dollars in net savings. These standards are directly responsive to the agency's statutory mandate to improve energy conservation and reduce the nation's energy dependence on foreign sources (33).

Mandatory Reporting of GHGs

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000

metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

New Source Review

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities would be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."*

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources would be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units

As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO_2 for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts (MW) would be required to meet an output-based standard of 1,000 pounds (lbs) of CO_2 per MW-hour (MWh), based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016, the Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards. The Clean Power Plan was officially repealed on June 19, 2019, when the EPA issued the final Affordable Clean Energy rule (ACE). Under ACE, new state-specific emission guidelines were established that provided existing coal-fired electric utility generating units with achievable standards.

On January 19, 2021, the D.C. Circuit Court of Appeals ruled that the EPA's ACE Rule for GHG emissions from power plants rested on an erroneous interpretation of the CAA that barred EPA from considering measures beyond those that apply at and to an individual source. The court therefore vacated and remanded the ACE Rule and adopted a replacement rule which regulates CO_2 emissions from existing power plants, potentially again considering generation shifting and other measures to more aggressively target power sector emissions.

Cap-and-Trade

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N_2O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008 and has retained all participating states as of 2020.

The Western Climate Initiative (WCI) partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15% below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015. While the WCI has yet to publish whether it has successfully reached the 2020 emissions goal initiative set in 2007, SB 32 requires that California, a major partner in the WCI, adopt the goal of reducing statewide GHG emissions to 40% below the 1990 level by 2030.

Executive Order 13990

On January 20, 2021, Federal agencies were directed to immediately review, and take action to address, Federal regulations promulgated and other actions taken during the last 4 years that conflict with national objectives to improve public health and the environment; ensure access to clean air and water; limit exposure to dangerous chemicals and pesticides; hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; reduce GHG emissions; bolster resilience to the impacts of climate change; restore and expand our national treasures and monuments; and prioritize both environmental justice and employment.

2.7.3 California

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

2.7.3.1 Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark AB 32, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 and Title 20 energy standards, were originally adopted for other purposes such as energy and water conservation but also provided GHG reductions. This section describes the major provisions of the legislation.

AB 1881

The Water Conservation in Landscaping Act of 2006 requires local agencies to adopt the updated Department of Water Resources (DWR) model ordinance or equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

SB 1368

California SB 1368 adds Sections 8340 and 8341 to the Public Utilities Code (effective January 1, 2007) with the intent "to prevent long-term investments in power plants with GHG emissions in excess of those produced by a combined-cycle natural gas power plant" with the aim of "reducing emissions of GHGs from the state's electricity consumption, not just the state's electricity production." SB 1368 provides a mechanism for reducing the GHG emissions of electricity providers, both in-state and out-of-state, thereby assisting CARB in meeting its mandate under AB 32, the Global Warming Solutions Act of 2006.

AB 32

The California State Legislature enacted AB 32, which required that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met[2]). GHGs, as defined under AB 32, include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, NF_3, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

SB 375

On September 30, 2008, SB 375 was signed by Governor Schwarzenegger. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California would not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations (MPOs) to include sustainable community strategies in their regional transportation plans for reducing GHG emissions; (2) aligns planning for transportation and housing; and (3) creates specified incentives for the implementation of the strategies.

[2] Based upon the 2024 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2022 GHG emissions period, California emitted an average 371.1 $MMTCO_2e$) (25). This is less than the 2020 emissions target of 431 $MMTCO_2e$. This is less than the 2020 emissions target of 431 $MMTCO_2e$.

SB 375 requires MPOs to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth-inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

AB 1493 - Pavley Fuel Efficiency Standards

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MY 2017 through 2025. The regulation will reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid EV and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California. On March 9, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards for cars and light trucks, which other states can also adopt and enforce. With this authority restored, EPA will continue partnering with states to advance the next generation of clean vehicle technologies.

Clean Energy and Pollution Reduction Act of 2015 (SB 350)

In October 2015, the legislature approved and Governor Brown signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 45% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and local publicly-owned utilities.

- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

SB 32

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (10).

2017 CARB Scoping Plan

In November 2017, CARB released the *Final 2017 Scoping Plan Update* (*2017 Scoping Plan*), which identifies the State's post-2020 reduction strategy. The *2017 Scoping Plan* reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

The *2017 Scoping Plan* establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030 (34).

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the *2017 Scoping Plan* framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH4 and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.

- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the *2017 Scoping Plan* acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the *2017 Scoping Plan* also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the *2017 Scoping Plan* and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year ($MTCO_2e$/yr), indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (35) (36).

Cap-and-Trade Program

The *2017 Scoping Plan* identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production)

commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25,000 $MTCO_2e$/yr. must comply with the Cap-and-Trade Program. Triggering of the 25,000 $MTCO_2e$/yr. "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year (37).

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the *First Update to the Climate Change Scoping Plan*:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."* (38)

The Cap-and-Trade Program covers approximately 80% of California's GHG emissions (34). The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

2022 CARB Scoping Plan

On December 15, 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) (39). The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce

GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The 2022 Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with *CEQA Guidelines* section 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. As stated in the Plan's executive summary:

> *"The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California's single largest source of planet-warming pollution."*
>
> *"[A]pproval of this plan catalyzes a number of efforts, including the development of new regulations as well as amendments to strengthen regulations and programs already in place, not just at CARB but across state agencies."*

Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives:

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.
- Complete the High-Speed Rail (HSR) System and other elements of the intercity rail network by 2040.
- Expand and complete planned networks of high-quality active transportation infrastructure.
- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.
- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.
- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.

- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., general plans, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.
- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "...focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting."

Additionally on Page 21 in Appendix D, CARB states: "The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the State's GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future." As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

2.7.3.2 Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

Executive Order S-3-05

California Governor Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that would stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07 (LCFS)

Governor Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. CARB adopted the LCFS on April 23, 2009.

After a series of legal changes, in order to address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. On November 16, 2015, the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

In 2018, CARB approved amendments to the regulation, which included strengthening the carbon intensity benchmarks through 2030 in compliance with the SB 32 GHG emissions reduction target for 2030. The amendments included crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector (40).

Executive Order S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the *2009 California Climate Adaptation Strategy* (*CNRA 2009*) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying, and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Governor's executive order aligned California's GHG reduction targets with those of leading international governments ahead of the U.N. Climate Change Conference in Paris late 2015. The Order set a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the *2017 Scoping Plan* to express the 2030 target in terms of $MMTCO_2e$. The Order also required the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable to local governments and the private sector. Legislation that would update AB 32 to make post-2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order B-55-18 and SB 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales of electricity are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California EPA (CalEPA), the California Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

2.7.3.3 California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 CCR Sections 1601 et seq. – Appliance Efficiency Regulations

The Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles (RV) or other mobile equipment (CEC 2012).

Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2025 California Green Building Code Standards that went into effect on January 1, 2026. The Project would be required to comply with the applicable standards in place at the time plan check submittals

are made. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items (41):

Nonresidential Mandatory Measures

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitors, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 20% of the peak daily visitors, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. Acceptable bicycle parking facility for Sections 5.106.4.1.2.1, 5.106.4.1.2.2 and 5.106.4.1.2.3 shall be conveniently located near the street and shall meet one of the following:
    1) Covered, lockable enclosures with permanently anchored racks for bicycles;
    2) Lockable bicycle rooms with permanently anchored racks; or
    3) Lockable, permanently anchored bicycle lockers.

  Calculations for bicycle parking requirements shall be rounded up to the nearest whole number (5.106.4.1.2).
- Electric Vehicle (EV) charging stations. Construction to provide EV infrastructure and facilitate EV charging shall comply with Section 5.106.5.3.1 EV capable spaces, Section 5.106.5.3.2. EV charging stations and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 EV charging stations – Power allocation method and associated Table 5.106.5.3.6, and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.
- Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:
    1) The minimum requirements in the *California Energy Code* for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the *California Administrative Code*; and
    2) Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
    3) Uplight and Glare ratings as defined in *California Energy Code* (shown in Tables 130.2-A and 130.2-B in Chapter 8)
    4) Allowable BUG ratings not exceeding those shown in Table 5.106.8, or
    5) Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section
- 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1)
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).

- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    1) Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
    2) Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    3) Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    4) Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Meters. For new buildings or additions in excess of 50,000 square feet, separate submeters shall be installed as follows (5.303.1.1):
    1) For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
    2) Where separate submeters for individual buildings tenants are unfeasible, for water supplied to the following subsystems:
        a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
        b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
        c. Steam and hot-water boilers with energy input more than 500,000 BTU/h (147 kW).

    For excess consumption, a separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day (5.303.1.2).

- Commissioning. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

CARB Refrigerant Management Program

CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

SB 97 and the CEQA Guidelines Update

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)."

In 2012, Public Resources Code Section 21083.05 was amended to state:

> *"The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code."*

On December 28, 2018, the Natural Resources Agency announced that the OAL had approved the amendments to the *CEQA Guidelines* for implementing CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 15064.4 was added to the *CEQA Guidelines* and states that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively insignificant compared to statewide, national, or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (42).

2.7.4 Local

City of Hesperia Climate Action Plan (CAP)

On July 20, 2010, the City of Hesperia adopted the CAP, which provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate (43). The CAP recommends GHG emissions targets that are consistent with the reduction targets of the State of California and presents a number of strategies that will make it possible for the City to meet the recommended targets. Strategy CAP-1 specifies that "projects that are consistent with this CAP could result in less than significant impacts regarding climate change. This is because emissions from these projects are generally accounted for in this CAP and would be consistent with this CAP reduction target. To be consistent with this CAP, CEQA projects must implement the applicable CAP implementation strategies listed in Section 4.2."

Although Project consistency with the CAP is demonstrated in the following sections for informational purposes, the CAP is not relied upon as the sole basis for determining the significance of GHG emissions. The CAP was adopted in 2010 and has not been updated to reflect subsequent changes in state law, including SB 32, updated CARB Scoping Plans, and more recent GHG reduction targets. As a result, while CAP consistency is informative, reliance on the CAP alone would not provide an adequate or current basis for determining GHG significance under CEQA.

3 PROJECT GHG IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant GHG impact. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State *CEQA Guidelines* (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (44):

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

The evaluation of an impact under CEQA requires measuring data from a project against both existing conditions and a "threshold of significance." For establishing significance thresholds, the OPR's amendments to the *CEQA Guidelines* Section 15064.7(c) state *"[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."*

CEQA Guidelines Section 15064.4(a) further states, *". . . A lead agency shall have discretion to determine, in the context of a particular project, whether to: (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use . . .; or (2) Rely on a qualitative analysis or performance-based standards."*

CEQA Guidelines Section 15064.4 provides that a lead agency should consider the following factors, among others, in assessing the significance of impacts from greenhouse gas emissions:

- Consideration #1: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- Consideration #2: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- Consideration #3: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

3.2.1 Thresholds of Significance

The City of Hesperia has elected to rely on compliance with a local air district threshold in the determination of significance of Project-related GHG emissions. Specifically, the City has selected the interim 3,000 $MTCO_2e$ per year threshold recommended by South Coast Air Quality Management District (SCAQMD) staff for residential and commercial sector projects against which to compare Project-related GHG emissions. Although the Project is not located within the SCAQMD's jurisdiction, the SCAQMD's recommended threshold of 3,000 $MTCO_2e$ per year is more restrictive than the MDAQMD's adopted significance threshold for GHGs of 100,000 tons per year (tpy) (90,719 $MTCO_2e$/yr). MDAQMD identifies that 100,000 tpy of GHG emissions from a single facility constitutes major sources that require a federal operating permit.

The 3,000 $MTCO_2e$ per year threshold is based on a 90 percent emission "capture" rate methodology. Prior to its use by the SCAQMD, the 90 percent emissions capture approach was one of the options suggested by the California Air Pollution Control Officers Association (CAPCOA) in their CEQA & Climate Change white paper (2008). A 90 percent emission capture rate means that unmitigated GHG emissions from the top 90 percent of all GHG-producing projects within a geographic area – the SCAB in this instance – would be subject to a detailed analysis of potential environmental impacts from GHG emissions, while the bottom 10 percent of all GHG-producing projects would be excluded from detailed analysis. A GHG significance threshold based on a 90 percent emission capture rate is appropriate to address the long-term adverse impacts associated with global climate change because medium and large projects will be required to implement measures to reduce GHG emissions, while small projects, which are generally infill development projects that are not the focus of the State's GHG reduction targets, are allowed to proceed. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial proportion of future development projects and demonstrate that cumulative emissions reductions are being achieved while setting the emission threshold high enough to exclude small projects that will, in aggregate, contribute approximate 1 percent of projected statewide GHG emissions in the Year 2050 (45).

In setting the threshold at 3,000 $MTCO_2e$ per year, SCAQMD researched a database of projects kept by the OPR. That database contained 798 projects, 87 of which were removed because they were very large projects and/or outliers that would skew emissions values too high, leaving 711 as the sample population to use in determining the 90th percentile capture rate. The SCAQMD analysis of the 711 projects within the sample population combined commercial, residential, and mixed-use projects. It should be noted that the sample of projects included warehouses and other light industrial land uses but did not include industrial processes (i.e., oil refineries, heavy manufacturing, electric generating stations, mining operations, etc.). Emissions from each of these projects were calculated by SCAQMD to provide a consistent method of emissions calculations across the sample population and from projects within the sample population. In calculating the emissions, the SCAQMD analysis determined that the 90th percentile ranged between 2,983 to 3,143 $MTCO_2e$ per year. The SCAQMD set their significance threshold at the low-end value of the range when rounded to the nearest hundred tons of emissions (i.e., 3,000 $MTCO_2e$ per year) to define small projects that are considered less than significant and do not need to provide further analysis.

The City understands that the 3,000 $MTCO_2e$ per year threshold for residential/commercial uses was proposed by SCAQMD a decade ago and was adopted as an interim policy; however, no permanent, superseding policy or threshold has since been adopted. The 3,000 $MTCO_2e$ per year threshold was developed and recommended by SCAQMD, an expert agency, based on substantial evidence as

provided in the *Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Threshold* (2008) document and subsequent Working Group meetings (latest of which occurred in 2010). SCAQMD has not withdrawn its support of the interim threshold and all documentation supporting the interim threshold remains on the SCAQMD website on a page that provides guidance to CEQA practitioners for air quality analysis (and where all SCAQMD significance thresholds for regional and local criteria pollutants and toxic air contaminants also are listed). Further, as stated by SCAQMD, this threshold "uses the Executive Order S-3-05 goal [80 percent below 1990 levels by 2050] as the basis for deriving the screening level" and, thus, remains valid for use in 2022 (45). Lastly, this threshold has been used for hundreds, if not thousands of GHG analyses performed for projects located within the SCAQMD jurisdiction.

Thus, for purposes of analysis in this analysis, if Project-related GHG emissions do not exceed the 3,000 $MTCO_2e$ per year threshold, then Project-related GHG emissions would clearly have a less-than-significant impact pursuant to Threshold GHG-1. On the other hand, if Project-related GHG emissions exceed 3,000 $MTCO_2e$ per year, the Project would be considered a substantial source of GHG emissions.

3.3 Models Employed To Greenhouse Gases

3.3.1 CalEEMod

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including MDAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates; as such, the latest version available at the time of this report has been utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (46). Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity for the Project is provided in Appendix 3.1. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water, refrigerants, stationary and on-site cargo equipment.

3.4 Construction Emissions

Project construction activities would generate CO_2 and CH_4 emissions. The *Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis* (AQIA) report contains detailed information regarding Project construction activities (47). As discussed in the AQIA, construction-related emissions are expected from the following activities.

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

3.4.1 Construction Duration

For purposes of analysis, Project construction will begin October 2026 and would last through September 2027. The construction schedule utilized in the analysis, shown in Table 3-1, represents a "conservative" analysis scenario. That is, should construction occur any time after the assumed dates, construction emissions would be reduced when compared to the levels presented here. This is due to the decrease in emission factors for construction equipment over time, and increasing stringency in emissions regulations.[3] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per the *CEQA Guidelines* (48).

TABLE 3-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	10/1/2026	10/19/2026	13
Grading	10/20/2026	12/17/2026	43
Building Construction	12/2/2026	8/19/2027	187
Paving	8/5/2027	9/20/2027	33
Architectural Coating	7/27/2027	9/20/2027	40

3.4.2 Construction Equipment

Site-specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod defaults. Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-2 is assumed to operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed.

TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Quantity	Hours
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8

[3] As shown in the CalEEMod User's Guide Version 2022, Appendix G "Table G-11. Statewide Average Annual Offroad Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Construction Activity	Equipment	Quantity	Hours
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

3.4.3 Construction Emissions Summary

For construction phase emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the MDAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then adding that number to the annual operational phase GHG emissions (49). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions from each phase are presented in Table 3-3.

TABLE 3-3: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	CO_2T	CH_4	N_2O	R	Total CO_2e
2026	472.48	0.01	0.04	0.28	485.36
2027	569.20	0.01	0.03	0.45	578.20
Total	1,041.68	0.02	0.07	0.73	1,063.57
Amortized	34.72	0.00	0.00	0.02	35.45

Source: CalEEMod construction-source emissions are presented in Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of CO_2, CH_4, N_2O, and Refrigerant emissions from the following primary sources:

- Mobile Source Emissions;
- Area Source Emissions;
- Energy Source Emissions;
- Water Supply, Treatment, and Distribution;
- Solid Waste;
- Refrigeration;
- Stationary Source; and
- On-site Cargo Handling Equipment Emissions.

3.5.1 Mobile Source Emissions

The Project related operational greenhouse gas emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis* were utilized in this analysis (50). Per the *Amargosa and Palmetto*

High-Cube Warehouse Traffic Impact Study the proposed Project expected to generate approximately 905 total trips per day which include 790 passenger car trips per day and 115 truck trips per day.

Passenger Vehicles

To determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses.

This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[4] & LDT2[5]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the fleet mix in Table 3-4 was utilized.

TABLE 3-4: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High-Cube Fulfillment Center (Non-Sort)	52.51%	4.52%	23.34%	16.84%	2.79%

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, MDV, and MCY vehicle types.

Trucks

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study*. The trip length function for the proposed industrial building use has been calculated to 30.47 miles for the high-cube fulfillment center warehouse (non-sort) with an assumption of 100% primary trips. This trip length assumption is higher than the CalEEMod defaults for trucks.

In order to be consistent with the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study*, trucks are broken down by truck type. The truck fleet mix is estimated by apportioning the trip rates for each truck type based on information provided in the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Study.* Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[6] & LHDT2[7])/2-axle, Medium-Heavy-Duty Trucks (MHD)/3-axle, and Heavy-Heavy-Duty Trucks (HHD)/4+-axle. To account for emissions generated by trucks, the fleet mix in Table 3-5 was utilized.

[4] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[5] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

[6] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[7] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

TABLE 3-5: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High-Cube Fulfillment Center (Non-Sort)	12.95%	3.57%	20.87%	62.61%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

On-Road Mobile Source Emissions Modeling Methodology

EMFAC 2021 and Off-Model Adjustment Factors

On-road mobile source emissions for the Project were estimated using the CARB's EMFAC 2021 model. EMFAC 2021 is the most recent version of EMFAC approved by the U.S. EPA for use in State Implementation Plans (SIPs) and federal transportation conformity determinations, and it remains the standard analytical platform for regional air quality planning in California.

On November 21, 2025, the U.S. EPA approved the use of EMFAC 2021 off-model adjustment factors. These adjustment factors remove the estimated emission benefits that were attributed to California's Advanced Clean Trucks, Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions, and Heavy Duty Omnibus regulations from EMFAC 2021. Because the preemption waivers for these regulations no longer have effect, these regulations are no longer enforceable. These adjustment factors are multipliers provided by CARB which adjust VOC, NO_X, PM_{10}, and $PM_{2.5}$ emission factors by year, region, and vehicle category to account for the removal of these regulations which are already accounted for in EMFAC 2021. Due to fleet turnover, the adjustment factors result in greater emission increases over the base EMFAC 2021 model outputs in later analysis years.

Although these adjustment factors were approved by EPA primarily for SIP and conformity analysis purposes, they have been incorporated into this analysis in order to provide a conservative estimation of emissions in an evolving regulatory environment.

Application of Adjustment Factors in This Analysis

Because CalEEMod utilizes EMFAC 2021 emission factors to calculate on-road vehicle emissions, adjustment factors were applied to the mobile source emissions outputs for each operational land use based on the vehicle fleet mix. Additionally, adjustment factors were applied to on-road construction emissions, such as those resulting from haul and vendor trucks.

This approach ensures that the emissions estimates are consistent with CARB-approved and EPA-approved planning methodologies, reflect regulatory programs applicable to heavy-duty vehicles that may not be fully captured in the base EMFAC 2021 model, and provide a technically robust basis for evaluating regional and localized air quality impacts.

Conservatism and Applicability Under CEQA

The use of EMFAC 2021 off-model adjustment factors is not required for CEQA purposes. CEQA does not mandate the use of EPA-approved models or SIP-specific adjustment techniques. Instead, CEQA requires a reasonable, good-faith effort to disclose a project's potential environmental impacts using methodologies supported by substantial evidence.

The decision to apply EMFAC 2021 off-model adjustment factors was made to be conservative and precautionary, even though such factors are primarily intended for federal SIP development and transportation conformity analyses. By incorporating these EPA-approved adjustment factors, the analysis avoids understating emissions that could result if certain regulatory impacts were omitted from the base model outputs.

Consistency with SCAQMD CEQA Practice

SCAQMD CEQA guidance recognizes the use of CARB's EMFAC model for estimating on-road mobile source emissions and does not prescribe a single mandatory modeling configuration for CEQA analyses. The application of EMFAC 2021 with CARB-developed, EPA-approved off-model adjustment factors falls within accepted professional practice and reflects a reasonable exercise of technical judgment.

3.5.2 Area Source Emissions

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that on October 9, 2021, Governor Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by January 1, 2024, which is now in effect. However, for purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod, and do not incorporate the emissions reductions that would be realized from implementation of AB 1346.

3.5.3 Energy Source Emissions

Combustion Emissions Associated with Electricity and Natural Gas

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Natural gas and electricity usage associated with the Project was calculated by CalEEMod using default parameters.

3.5.4 Water Supply, Treatment, and Distribution

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod default parameters were used.

3.5.5 Solid Waste

The proposed land uses would result in the generation and disposal of solid waste. A percentage of this waste would be diverted from landfills by a variety of means, such as reducing the amount of

waste generated, recycling, and/or composting. The remainder of the waste not diverted would be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the Project were calculated by CalEEMod using default parameters.

3.5.6 Refrigerants

Air conditioning (A/C) and refrigeration equipment associated with the buildings are anticipated to generate GHG emissions. CalEEMod automatically generates a default A/C and refrigeration equipment inventory for each project land use subtype based on industry data from the USEPA (2016b). CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate. Note that CalEEMod does not quantify emissions from the disposal of refrigeration and A/C equipment at the end of its lifetime. Per 17 CCR 95371, new facilities with refrigeration equipment containing more than 50 pounds of refrigerant are prohibited from utilizing refrigerants with a GWP of 150 or greater as of January 1, 2022. Additionally, beginning January 1, 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater. GHG emissions associated with refrigerants were calculated by CalEEMod using default parameters.

3.5.7 Stationary Source Emissions

The proposed Project was conservatively assumed to include installation of one (1) 300-hp diesel-powered fire pump and one (1) 700-hp diesel-power emergency generator at the industrial building. The fire pump and emergency generator were estimated to operate for up to 1 hour per day, 1 day per week for up to 50 hours per year for maintenance and testing purposes. Emissions associated with the stationary diesel-powered emergency fire pump and emergency generator were calculated using CalEEMod.

3.5.8 On-Site Cargo Handling Equipment Emissions

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, on-site modeled operational equipment includes up to two (2) 175 hp, natural gas-powered cargo handling equipment – port tractor operating 4 hours a day[8] for 365 days of the year.

3.6 GHG Emissions Findings and Recommendations

3.6.1 GHG Impact 1

Potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment.

Emissions Summary

Impacts Without Mitigation

[8] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

The estimated Project-related GHG emissions are summarized in Table 3-6. Detailed operation model outputs for the Project are presented in Appendix 3.1. As shown on Table 3-6, the Project would result in 4,257.17 $MTCO_2e/yr$.

TABLE 3-6: PROJECT GHG EMISSIONS

Source	Emissions (MT/yr)				
	CO_2T	CH_4	N_2O	R	Total CO_2e
Annual construction emissions amortized over 30 years	34.72	0.00	0.00	0.02	35.45
Mobile	2,724.22	0.05	0.23	13.17	2,807.59
Area	7.30	0.00	0.00	0.00	7.32
Energy	885.55	0.08	0.01	0.00	889.18
Water	145.66	3.77	0.09	0.00	266.89
Waste	41.91	4.19	0.00	0.00	146.64
Stationary	19.04	0.00	0.00	0.00	19.10
On-Site Equipment	0.00	0.00	0.00	0.00	94.75
Total CO_2e (All Sources)	4,257.17				

Source: CalEEMod operational-source (unmitigated) emissions are presented in Appendix 3.1.

As shown, construction and operation of the Project would generate a total of approximately 4,257.17 $MTCO_2e/yr.$, which would exceed the significance threshold of 3,000 $MTCO_2e/yr.$; therefore, Project-related GHG emissions are considered potentially significant. The majority of the GHG emissions (59%) are associated with non-construction related mobile sources, as shown previously in Table 3-6. Emissions of motor vehicles are controlled by State and Federal standards, and the Project has no control over these emissions.

Level of Significance Before Mitigation

Potentially Significant.

Applicable GHG Mitigation Measures

Section ES.3 identified the following mitigation measures designed to reduce Project GHG emissions. As a conservation measure, no quantification of emissions reductions associated with the following mitigation measures was taken in this analysis.

MM GHG-1

The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible:

- Only haul trucks meeting model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site.
- Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: (1) instructions for truck drivers to shut off engines when not in use; (2) instructions for drivers of diesel trucks to restrict idling to no more than 5 minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the

parking brake is engaged; and (3) telephone numbers of the building facilities manager and CARB to report violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place.

- Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.
- The minimum number of automobile electric vehicle (EV) charging stations required by the California Code of Regulations Title 24 shall be provided. In addition, the buildings shall include electrical infrastructure sufficiently sized to accommodate the potential installation of additional auto and truck EV charging stations in the future.
- Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available.

MM GHG-2

The Project shall implement the following measures in order to reduce operational energy source air pollutant emissions to the extent feasible:

- The Project shall include rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid.
- Install Energy Star-rated heating, cooling, lighting, and appliances.
- Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project.
- Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.

MM GHG-3

The Project shall include the following language within tenant lease agreements in order to reduce operational air pollutant emissions to the extent feasible:

- Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as forklifts, handheld landscaping equipment, yard trucks, office appliances, etc.
- Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible.
- Tenants shall be in, and monitor, compliance with all current air quality regulations for on-road trucks including the CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.

MM GHG-4

Prior to the issuance of a building permit, Developer shall provide documentation to the City of Hesperia demonstrating that the Project will achieve Leadership in Energy and Environmental Design (LEED) certification to meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application.

3.6.2 GHG Impact 2

Potential to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

As previously stated, pursuant to Section 15604.4 of the *CEQA Guidelines*, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (51). As such, the Project's consistency with the 2022 Scoping Plan is discussed below. It should be noted that the Project's consistency with the 2022 Scoping Plan also satisfies consistency with AB 32 since the 2022 Scoping Plan is based on the overall targets established by AB 32 and SB 32. Consistency with the 2008 and 2017 Scoping Plan is not necessary since both of these plans have been superseded by the 2022 Scoping Plan. Furthermore, CARB recommends the use of a CAP to determine a project's impacts with respect to GHG and states that projects that are consistent with a CAP are presumed to be consistent with the 2022 Scoping Plan.

2022 CARB Scoping Plan Consistency

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. Lastly, the Project would be required to comply with applicable elements outlined in the City's CAP. As such, the Project would be consistent with the 2022 Scoping Plan.

City of Hesperia CAP Consistency

As previously stated, the City of Hesperia CAP presents a number of strategies that will make it possible for the City to meet the recommended GHG emissions targets that are consistent with the reduction targets of the State. Strategy CAP-1 specifies that "projects that are consistent with this CAP could result in less than significant impacts regarding climate change. This is because emissions from these projects are generally accounted for in this CAP and would be consistent with this CAP reduction target. To be consistent with this CAP, CEQA projects must implement the applicable CAP implementation strategies listed in Section 4.2."

The Project demonstrates consistency with several applicable CAP strategies, as shown on Table 3-7:

TABLE 3-7: CAP CHECKLIST STRATEGIES

CAP Strategies	Consistency Analysis
CAP-1: Reduce emissions from new development through the CEQA process.	Consistent. The Project includes several Project Design Features as illustrated in section ES.4 and mitigation measures (MM GHG-1 through MM

CAP Strategies	Consistency Analysis
	GHG-4) to reduce emissions attributable to the proposed Project for construction and operations.
CAP-2: Encourage mixed use development in new development and redevelopment areas.	Not Applicable.
CAP-3: Increase transit use.	Consistent. As discussed in the VMT Assessment, transportation demand management (TDM) measures are recommended to reduce single-occupancy vehicle trips and support increased transit use; however, they are not anticipated to reduce VMT impacts to a less than significant level.
CAP-4: Promote compact development by protecting open space and encouraging infill and redevelopment of underutilized parcels in urbanized areas.	Consistent. Implementation of the Project would consist of development at a vacant and undeveloped site.
CAP-5: Provide pedestrian connections in new and existing development to improve pedestrian mobility and accessibility.	No conflict. The project includes off-site roadway improvements that support circulation to improve pedestrian mobility; however, sidewalks are not currently present along Amargosa Road and specific pedestrian improvements are not identified.
CAP-6: Increase bicycle use through a safe and well-connected system of bicycle paths and end of trip facilities.	Consistent. There is an existing Class I bike path along Main Street east of the I-15 Freeway near the Project site to promote bicycle use.
CAP-7: Use traffic calming measures to improve traffic flow, pedestrian orientation, and bicycle use.	Consistent. Public roadway improvements would be implemented as part of the Project to improve traffic flow and bicycle use.
CAP-8: Use parking facility designs and parking management to reduce vehicle trips.	No conflict. As discussed in the VMT Assessment, transportation demand management (TDM) measures are identified that would reduce the use of single occupant vehicles by employees; however, parking management strategies are not specifically identified.
CAP-9: Increase the use of energy conservation features and renewable sources of energy.	Consistent. The Project would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building.
CAP-10: Reduce energy use from the transport and treatment of water.	Consistent. The Project would implement a Water Conservation Strategy to reduce water demands and associated energy use (see Project Design Feature section ES.4).
CAP-11: Improve the City's recycling and source reduction programs to make continued progress in minimizing waste.	Consistent. The Project will implement a 75% waste diversion program (see Project Design Feature section ES.4).
CAP-12: Participate in regional programs and initiatives that reduce greenhouse gas emissions.	Consistent. The Project would comply with all current applicable regulatory requirements that aim at reducing greenhouse gas emissions.

It should be noted that although the Project would be consistent with the CAP, the Project would still exceed the 3,000 $MTCO_2e$/yr. threshold and therefore impacts are considered to be significant and unavoidable. ***This is a significant and unavoidable impact.***

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5 CERTIFICATION

The contents of this GHG study report represent an accurate depiction of the GHG impacts associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this GHG report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

Haseeb Qureshi
Principal
URBAN CROSSROADS, INC.
1133 Camelback #8329
Newport Beach, CA 92658
hqureshi@urbanxroads.com

Education

Master of Science in Environmental Studies
California State University, Fullerton • May 2010
Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

Professional Affiliations

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

Professional Certifications

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APPENDIX 3.1:

CALEEMOD EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial Detailed Report

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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

8.1. Justifications

8.3. Land Use

8.4. Construction

8.4.1. Construction Phases

8.4.2. Off-Road Equipment

8.4.6. Trips and VMT

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

8.5.1.2. Fleet Mix

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial
Construction Start Date	10/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80000
Precipitation (days)	1.40000
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.39

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	499.714	1000sqft	11.4719	499,714	306,000	—	—	PC

Parking Lot	482.000	Space	3.18000	0.00000	0.00000	—	—	—
Other Non-Asphalt Surfaces	691.126	1000sqft	15.8661	0.00000	0.00000	—	—	—
User Defined Industrial	499.714	User Defined Unit	0.00000	0.00000	0.00000	—	—	Trucks

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.19643	8.02361	7.23447	13.1491	0.02125	0.27888	1.54096	1.74731	0.25889	0.37057	0.62301	—	3,438.03	3,438.03	0.07630	0.25117	2.70217	3,492.39
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49585	1.46431	1.32029	2.39971	0.00388	0.05089	0.28123	0.31888	0.04725	0.06763	0.11370	—	569.205	569.205	0.01263	0.04158	0.44738	578.204

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	67.7585	67.2201	21.2696	45.3516	0.05810	0.71781	4.05275	4.77056	0.66276	0.97361	1.63637	—	10,084.8	10,084.8	0.22074	0.42693	16.3209	10,233.8
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	6.84697	5.83006	57.6159	58.4484	0.18440	2.05105	9.40587	11.4569	1.90769	2.74925	4.55723	—	25,936.5	25,936.5	0.44066	2.29347	1.04896	26,632.0
2027	2.35573	2.01637	12.8777	24.8152	0.03937	0.38979	3.22246	3.61225	0.36062	0.77541	1.13603	—	6,954.38	6,954.38	0.15202	0.35187	0.33976	7,063.38
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.83067	0.70404	7.23447	6.60398	0.02125	0.27888	1.12821	1.40708	0.25889	0.36411	0.62301	—	2,853.78	2,853.78	0.05139	0.25117	1.70386	2,931.62
2027	8.19643	8.02361	6.66702	13.1491	0.01954	0.20635	1.54096	1.74731	0.19078	0.37057	0.56136	—	3,438.03	3,438.03	0.07630	0.16694	2.70217	3,492.39
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.15160	0.12849	1.32029	1.20523	0.00388	0.05089	0.20590	0.25679	0.04725	0.06645	0.11370	—	472.476	472.476	0.00851	0.04158	0.28209	485.363
2027	1.49585	1.46431	1.21673	2.39971	0.00357	0.03766	0.28123	0.31888	0.03482	0.06763	0.10245	—	569.205	569.205	0.01263	0.02764	0.44738	578.204

2.2.2. Onsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	66.3322	65.9438	18.2252	25.4905	0.04180	0.68813	0.00000	0.68813	0.63308	0.00000	0.63308	—	4,318.83	4,318.83	0.17519	0.03504	0.00000	4,333.65
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	5.41210	4.54318	40.6228	42.7354	0.08755	1.79198	5.66228	7.42729	1.64862	2.68618	4.30998	—	9,345.32	9,345.32	0.37909	0.07582	0.00000	9,377.39
2027	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	0.00000	0.36460	0.33543	0.00000	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	0.00000	2,638.73
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.71844	0.60343	5.38779	5.30758	0.01062	0.24978	0.51864	0.76842	0.22980	0.21149	0.44128	—	1,142.55	1,142.55	0.04635	0.00927	0.00000	1,146.47
2027	7.70256	7.58854	5.34785	7.40975	0.01306	0.19456	0.00000	0.19456	0.17899	0.00000	0.17899	—	1,344.90	1,344.90	0.05456	0.01091	0.00000	1,349.52
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.13112	0.11013	0.98327	0.96863	0.00194	0.04558	0.09465	0.14024	0.04194	0.03860	0.08053	—	189.162	189.162	0.00767	0.00153	0.00000	189.811
2027	1.40572	1.38491	0.97598	1.35228	0.00238	0.03551	0.00000	0.03551	0.03267	0.00000	0.03267	—	222.664	222.664	0.00903	0.00181	0.00000	223.428

2.2.3. Offsite Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.42631	1.27625	3.04447	19.8611	0.01630	0.02968	4.05275	4.08243	0.02968	0.97361	1.00329	—	5,765.95	5,765.95	0.04555	0.39189	16.3209	5,900.20
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.43487	1.28688	16.9931	15.7131	0.09685	0.25907	6.71530	6.97437	0.25907	1.66647	1.92554	—	16,591.1	16,591.1	0.06158	2.21765	1.04896	17,254.6
2027	1.02728	0.90440	2.70510	10.7783	0.01383	0.02519	3.22246	3.24764	0.02519	0.77541	0.80059	—	4,324.68	4,324.68	0.04535	0.33053	0.33976	4,424.65
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.11223	0.10062	1.84668	1.29640	0.01063	0.02910	0.60957	0.63866	0.02910	0.15263	0.18172	—	1,711.24	1,711.24	0.00504	0.24190	1.70386	1,785.15
2027	0.49387	0.43507	1.31918	5.73934	0.00647	0.01179	1.54096	1.55275	0.01179	0.37057	0.38237	—	2,093.13	2,093.13	0.02174	0.15603	2.70217	2,142.87
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.02048	0.01836	0.33702	0.23659	0.00194	0.00531	0.11125	0.11656	0.00531	0.02785	0.03316	—	283.315	283.315	0.00084	0.04005	0.28209	295.552
2027	0.09013	0.07940	0.24075	1.04743	0.00118	0.00215	0.28123	0.28338	0.00215	0.06763	0.06978	—	346.541	346.541	0.00360	0.02583	0.44738	354.777

2.3. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

2.4. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Area	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708

Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	21.8698	20.8291	18.9786	79.4822	0.21997	0.70553	13.0154	13.7209	0.68460	3.32406	4.00866	474.594	27,080.8	27,555.4	48.9592	2.18795	56.1397	29,487.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Area	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Total	17.6725	16.9368	19.5585	45.2745	0.20741	0.66704	13.0154	13.6824	0.65552	3.32406	3.97959	474.594	25,852.9	26,327.5	48.9640	2.20637	1.45591	28,210.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.54737	3.17420	10.7417	35.9811	0.15905	0.19726	11.0744	11.2716	0.18745	2.82839	3.01584	—	16,405.1	16,405.1	0.31973	1.38651	20.6434	16,847.0
Area	13.3642	13.2171	0.09019	10.7177	0.00064	0.01904	—	0.01904	0.01439	—	0.01439	—	44.0739	44.0739	0.00185	0.00038	—	44.2329
Energy	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	5,348.80	5,348.80	0.48909	0.03236	—	5,370.67
Water	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Waste	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Stationary	0.24700	0.22477	0.62832	0.57320	0.00108	0.03307	0.00000	0.03307	0.03307	0.00000	0.03307	0.00000	115.002	115.002	0.00462	0.00090	0.00000	115.386
Total	17.4393	16.7565	14.0119	49.4154	0.17608	0.44329	11.0744	11.5177	0.42884	2.82839	3.25723	474.594	22,571.4	23,046.0	48.8860	1.96724	20.6434	24,875.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21
Area	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Energy	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	885.555	885.555	0.08097	0.00536	—	889.175
Water	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

Stationary	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034
Total	3.18267	3.05805	2.55717	9.01831	0.03213	0.08090	2.02108	2.10198	0.07826	0.51618	0.59444	78.5745	3,736.95	3,815.52	8.09364	0.32570	3.41775	4,118.34

3. Construction Emissions Details

3.1. Site Preparation (2026)

3.1.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.56018	3.83182	34.6139	31.0055	0.05105	1.76500	—	1.76500	1.62380	—	1.62380	—	5,531.64	5,531.64	0.22439	0.04488	—	5,550.63
Dust From Material Movement	—	—	—	—	—	—	5.66228	5.66228	—	2.68618	2.68618	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16242	0.13648	1.23283	1.10430	0.00182	0.06286	—	0.06286	0.05783	—	0.05783	—	197.017	197.017	0.00799	0.00160	—	197.694

Dust From Material Movement	—	—	—	—	—	—	0.20167	0.20167	—	0.09567	0.09567	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02964	0.02491	0.22499	0.20154	0.00033	0.01147	—	0.01147	0.01055	—	0.01055	—	32.6185	32.6185	0.00132	0.00026	—	32.7304
Dust From Material Movement	—	—	—	—	—	—	0.03680	0.03680	—	0.01746	0.01746	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08314	0.07408	0.08488	0.89932	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	221.545	221.545	0.00347	0.00868	0.02194	224.240
Vendor	0.00489	0.00453	0.13214	0.05443	0.00099	0.00180	0.03422	0.03602	0.00180	0.00946	0.01125	—	125.068	125.068	0.00026	0.01707	0.00818	130.170
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00299	0.00268	0.00328	0.03610	0.00000	0.00000	0.00814	0.00814	0.00000	0.00191	0.00191	—	8.12321	8.12321	0.00014	0.00031	0.01301	8.23179
Vendor	0.00018	0.00016	0.00468	0.00191	0.00004	0.00006	0.00122	0.00128	0.00006	0.00034	0.00040	—	4.45165	4.45165	0.00001	0.00061	0.00486	4.63794

Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00055	0.00049	0.00060	0.00659	0.00000	0.00000	0.00149	0.00149	0.00000	0.00035	0.00035	—	1.34489	1.34489	0.00002	0.00005	0.00215	1.36287
Vendor	0.00003	0.00003	0.00085	0.00035	0.00001	0.00001	0.00022	0.00023	0.00001	0.00006	0.00007	—	0.73702	0.73702	< 0.000005	0.00010	0.00080	0.76786
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2026)

3.2.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.03197	3.38798	29.9505	28.6693	0.06200	1.38262	—	1.38262	1.27201	—	1.27201	—	6,715.43	6,715.43	0.27241	0.05448	—	6,738.47
Dust From Material Movement	—	—	—	—	—	—	2.69057	2.69057	—	0.98307	0.98307	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47500	0.39913	3.52841	3.37748	0.00730	0.16288	—	0.16288	0.14985	—	0.14985	—	791.133	791.133	0.03209	0.00642	—	793.848

Dust From Material Movement	—	—	—	—	—	—	0.31697	0.31697	—	0.11581	0.11581	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08669	0.07284	0.64393	0.61639	0.00133	0.02973	—	0.02973	0.02735	—	0.02735	—	130.981	130.981	0.00531	0.00106	—	131.431
Dust From Material Movement	—	—	—	—	—	—	0.05785	0.05785	—	0.02114	0.02114	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09502	0.08466	0.09700	1.02780	0.00000	0.00000	0.26142	0.26142	0.00000	0.06128	0.06128	—	253.194	253.194	0.00397	0.00992	0.02508	256.275
Vendor	0.01588	0.01473	0.42944	0.17689	0.00321	0.00585	0.11123	0.11707	0.00585	0.03073	0.03658	—	406.470	406.470	0.00086	0.05549	0.02659	423.053
Hauling	0.25845	0.23564	13.5988	2.96072	0.07981	0.22804	3.12019	3.34823	0.22804	0.79905	1.02709	—	11,523.5	11,523.5	0.01140	1.80912	0.61958	12,063.5
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01130	0.01013	0.01239	0.13648	0.00000	0.00000	0.03077	0.03077	0.00000	0.00721	0.00721	—	30.7075	30.7075	0.00052	0.00117	0.04920	31.1180
Vendor	0.00190	0.00177	0.05026	0.02057	0.00038	0.00069	0.01309	0.01378	0.00069	0.00362	0.00431	—	47.8552	47.8552	0.00010	0.00654	0.05220	49.8579

Hauling	0.03269	0.02910	1.60339	0.34342	0.00940	0.02686	0.36733	0.39419	0.02686	0.09407	0.12094	—	1,356.78	1,356.78	0.00134	0.21313	1.21526	1,421.54
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00206	0.00185	0.00226	0.02491	0.00000	0.00000	0.00562	0.00562	0.00000	0.00132	0.00132	—	5.08398	5.08398	0.00009	0.00019	0.00814	5.15194
Vendor	0.00035	0.00032	0.00917	0.00375	0.00007	0.00013	0.00239	0.00252	0.00013	0.00066	0.00079	—	7.92297	7.92297	0.00002	0.00108	0.00864	8.25454
Hauling	0.00597	0.00531	0.29262	0.06267	0.00172	0.00490	0.06704	0.07194	0.00490	0.01717	0.02207	—	224.630	224.630	0.00022	0.03529	0.20120	235.352

3.3. Building Construction (2026)

3.3.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.38013	1.15520	10.6724	14.0661	0.02555	0.40936	—	0.40936	0.37661	—	0.37661	—	2,629.89	2,629.89	0.10668	0.02134	—	2,638.91
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08103	0.06782	0.62656	0.82580	0.00150	0.02403	—	0.02403	0.02211	—	0.02211	—	154.397	154.397	0.00626	0.00125	—	154.926
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.01479	0.01238	0.11435	0.15071	0.00027	0.00439	—	0.00439	0.00404	—	0.00404	—	25.5621	25.5621	0.00104	0.00021	—	25.6498
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.99713	0.88840	1.01795	10.7857	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,657.01	2,657.01	0.04164	0.10411	0.26318	2,689.34
Vendor	0.06840	0.06346	1.84991	0.76199	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,750.95	1,750.95	0.00370	0.23902	0.11453	1,822.38
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05908	0.05297	0.06479	0.71375	0.00000	0.00000	0.16091	0.16091	0.00000	0.03772	0.03772	—	160.587	160.587	0.00272	0.00611	0.25727	162.733
Vendor	0.00409	0.00380	0.10789	0.04416	0.00081	0.00148	0.02811	0.02959	0.00148	0.00777	0.00924	—	102.730	102.730	0.00022	0.01403	0.11206	107.029
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01078	0.00967	0.01182	0.13026	0.00000	0.00000	0.02937	0.02937	0.00000	0.00688	0.00688	—	26.5870	26.5870	0.00045	0.00101	0.04259	26.9424
Vendor	0.00075	0.00069	0.01969	0.00806	0.00015	0.00027	0.00513	0.00540	0.00027	0.00142	0.00169	—	17.0082	17.0082	0.00004	0.00232	0.01855	17.7199
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Building Construction (2027)

3.4.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32845	1.11196	10.1725	14.0369	0.02554	0.36460	—	0.36460	0.33543	—	0.33543	—	2,629.71	2,629.71	0.10667	0.02133	—	2,638.73
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60053	0.50267	4.59855	6.34543	0.01155	0.16482	—	0.16482	0.15163	—	0.15163	—	1,188.77	1,188.77	0.04822	0.00964	—	1,192.85
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10960	0.09174	0.83924	1.15804	0.00211	0.03008	—	0.03008	0.02767	—	0.02767	—	196.815	196.815	0.00798	0.00160	—	197.490
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.05266	0.95317	0.82824	14.9685	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,949.10	2,949.10	0.03239	0.09948	9.18066	2,988.74
Vendor	0.07457	0.05457	1.68966	0.70347	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,710.77	1,710.77	0.00370	0.22519	3.94369	1,781.91
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.96011	0.85601	0.92310	10.0477	0.00000	0.00000	2.74333	2.74333	0.00000	0.64303	0.64303	—	2,611.99	2,611.99	0.04164	0.10411	0.23747	2,644.30
Vendor	0.06716	0.04840	1.78201	0.73063	0.01383	0.02519	0.47913	0.50432	0.02519	0.13238	0.15756	—	1,712.68	1,712.68	0.00370	0.22642	0.10228	1,780.35
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.43402	0.38696	0.45599	5.08279	0.00000	0.00000	1.23902	1.23902	0.00000	0.29041	0.29041	—	1,215.46	1,215.46	0.01883	0.04706	1.79287	1,231.75
Vendor	0.03148	0.02299	0.80579	0.32582	0.00625	0.01139	0.21643	0.22781	0.01139	0.05980	0.07119	—	773.726	773.726	0.00167	0.10236	0.76927	805.039
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07921	0.07062	0.08322	0.92761	0.00000	0.00000	0.22612	0.22612	0.00000	0.05300	0.05300	—	201.234	201.234	0.00312	0.00779	0.29683	203.931
Vendor	0.00574	0.00420	0.14706	0.05946	0.00114	0.00208	0.03950	0.04158	0.00208	0.01091	0.01299	—	128.099	128.099	0.00028	0.01695	0.12736	133.283
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Paving (2027)

3.5.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87761	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.25247	0.25247	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07935	0.06667	0.62785	0.89987	0.00126	0.02695	—	0.02695	0.02480	—	0.02480	—	136.621	136.621	0.00554	0.00111	—	137.089
Paving	0.02283	0.02283	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01448	0.01217	0.11458	0.16423	0.00023	0.00492	—	0.00492	0.00453	—	0.00453	—	22.6191	22.6191	0.00092	0.00018	—	22.6967
Paving	0.00417	0.00417	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07523	0.06812	0.05919	1.06979	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	210.771	210.771	0.00231	0.00711	0.65614	213.603
Vendor	0.01332	0.00974	0.30172	0.12562	0.00247	0.00450	0.08556	0.09006	0.00450	0.02364	0.02814	—	305.494	305.494	0.00066	0.04021	0.70423	318.198
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00620	0.00553	0.00652	0.07265	0.00000	0.00000	0.01771	0.01771	0.00000	0.00415	0.00415	—	17.3737	17.3737	0.00027	0.00067	0.02563	17.6065
Vendor	0.00112	0.00082	0.02878	0.01164	0.00022	0.00041	0.00773	0.00814	0.00041	0.00214	0.00254	—	27.6331	27.6331	0.00006	0.00366	0.02747	28.7514
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00113	0.00101	0.00119	0.01326	0.00000	0.00000	0.00323	0.00323	0.00000	0.00076	0.00076	—	2.87642	2.87642	0.00004	0.00011	0.00424	2.91496
Vendor	0.00021	0.00015	0.00525	0.00212	0.00004	0.00007	0.00141	0.00148	0.00007	0.00039	0.00046	—	4.57497	4.57497	0.00001	0.00061	0.00455	4.76012
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6. Architectural Coating (2027)

3.6.1. Onsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18287	0.15113	1.10822	1.50052	0.00230	0.02540	—	0.02540	0.02337	—	0.02337	—	178.017	178.017	0.00722	0.00144	—	178.628

Architectural	63.6908	63.6908	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02004	0.01656	0.12145	0.16444	0.00025	0.00278	—	0.00278	0.00256	—	0.00256	—	19.5087	19.5087	0.00079	0.00016	—	19.5757
Architectural Coatings	6.97981	6.97981	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00366	0.00302	0.02216	0.03001	0.00005	0.00051	—	0.00051	0.00047	—	0.00047	—	3.22989	3.22989	0.00013	0.00003	—	3.24097
Architectural Coatings	1.27382	1.27382	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.6.2. Offsite - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.21053	0.19063	0.16565	2.99371	0.00000	0.00000	0.54867	0.54867	0.00000	0.12861	0.12861	—	589.820	589.820	0.00648	0.01990	1.83613	597.747
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02104	0.01876	0.02211	0.24644	0.00000	0.00000	0.06007	0.06007	0.00000	0.01408	0.01408	—	58.9316	58.9316	0.00091	0.00228	0.08693	59.7213
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00384	0.00342	0.00403	0.04498	0.00000	0.00000	0.01096	0.01096	0.00000	0.00257	0.00257	—	9.75680	9.75680	0.00015	0.00038	0.01439	9.88755
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-Rail	4.15146	3.76212	2.30326	48.6373	0.10354	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	10,475.4	10,475.4	0.33718	0.23207	30.8327	10,583.8
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.31016	0.25970	9.35407	2.78402	0.09193	0.19078	3.03890	3.22967	0.18248	0.81104	0.99352	—	9,669.36	9,669.36	0.02474	1.36909	25.3071	10,103.3
Total	4.46162	4.02182	11.6573	51.4213	0.19547	0.23159	13.0154	13.2470	0.22008	3.32406	3.54414	—	20,144.8	20,144.8	0.36192	1.60116	56.1397	20,687.1
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	3.83715	3.45277	2.56232	36.1453	0.09224	0.04081	9.97649	10.0173	0.03760	2.51302	2.55062	—	9,332.15	9,332.15	0.34629	0.24935	0.79931	9,415.91
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.29445	0.24570	9.85783	2.80133	0.09198	0.19089	3.03890	3.22979	0.18259	0.81104	0.99363	—	9,674.11	9,674.11	0.02416	1.37099	0.65660	10,083.9
Total	4.13159	3.69847	12.4202	38.9467	0.18422	0.23171	13.0154	13.2471	0.22019	3.32406	3.54425	—	19,006.3	19,006.3	0.37045	1.62034	1.45591	19,499.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.60062	0.54021	0.41656	6.13508	0.01474	0.00634	1.54915	1.55550	0.00584	0.39023	0.39607	—	1,352.55	1,352.55	0.04949	0.03627	1.87712	1,366.48

Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	0.04678	0.03909	1.54380	0.43146	0.01429	0.02966	0.47192	0.50158	0.02837	0.12596	0.15432	—	1,363.51	1,363.51	0.00344	0.19328	1.54063	1,422.73
Total	0.64739	0.57929	1.96036	6.56654	0.02903	0.03600	2.02108	2.05708	0.03421	0.51618	0.55039	—	2,716.06	2,716.06	0.05294	0.22955	3.41775	2,789.21

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,189.13	2,189.13	0.20867	0.02529	—	2,201.88
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	115.093	115.093	0.01097	0.00133	—	115.763
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,304.22	2,304.22	0.21964	0.02662	—	2,317.64
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	362.435	362.435	0.03455	0.00419	—	364.546
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	19.0549	19.0549	0.00182	0.00022	—	19.1660
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	—	381.490	381.490	0.03636	0.00441	—	383.712

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.28068	0.14034	2.55168	2.14341	0.01531	0.19393	—	0.19393	0.19393	—	0.19393	—	3,044.58	3,044.58	0.26944	0.00573	—	3,053.02
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	—	0.00000	—	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	0.05122	0.02561	0.46568	0.39117	0.00279	0.03539	—	0.03539	0.03539	—	0.03539	—	504.065	504.065	0.04461	0.00095	—	505.463

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86722	3.56896	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944
Total	15.3243	15.0261	0.18288	21.7331	0.00130	0.03860	—	0.03860	0.02918	—	0.02918	—	89.3722	89.3722	0.00375	0.00077	—	89.6944

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	10.7591	10.7591	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.69798	0.69798	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11.4571	11.4571	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.96354	1.96354	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.12738	0.12738	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.34805	0.32121	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325
Total	2.43897	2.41213	0.01646	1.95598	0.00012	0.00347	—	0.00347	0.00263	—	0.00263	—	7.29695	7.29695	0.00031	0.00006	—	7.32325

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrig Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	221.438	658.338	879.776	22.7687	0.54709	—	1,612.03
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	36.6616	108.995	145.657	3.76962	0.09058	—	266.889

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	253.156	0.00000	253.156	25.3021	0.00000	—	885.708
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000
Total	—	—	—	—	—	—	—	—	—	—	—	41.9129	0.00000	41.9129	4.18905	0.00000	—	146.639

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	1.26219	1.14859	3.21070	2.92906	0.00552	0.16898	0.00000	0.16898	0.16898	0.00000	0.16898	0.00000	587.660	587.660	0.02360	0.00460	0.00000	589.622
Fire Pump	0.54094	0.49225	1.37602	1.25531	0.00237	0.07242	0.00000	0.07242	0.07242	0.00000	0.07242	0.00000	251.854	251.854	0.01011	0.00197	0.00000	252.695
Total	1.80313	1.64085	4.58672	4.18437	0.00789	0.24141	0.00000	0.24141	0.24141	0.00000	0.24141	0.00000	839.514	839.514	0.03371	0.00658	0.00000	842.317
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.03155	0.02871	0.08027	0.07323	0.00014	0.00422	0.00000	0.00422	0.00422	0.00000	0.00422	0.00000	13.3279	13.3279	0.00054	0.00010	0.00000	13.3724
Fire Pump	0.01352	0.01231	0.03440	0.03138	0.00006	0.00181	0.00000	0.00181	0.00181	0.00000	0.00181	0.00000	5.71196	5.71196	0.00023	0.00004	0.00000	5.73103
Total	0.04508	0.04102	0.11467	0.10461	0.00020	0.00604	0.00000	0.00604	0.00604	0.00000	0.00604	0.00000	19.0399	19.0399	0.00076	0.00015	0.00000	19.1034

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/1/2026	10/19/2026	5.00000	13.0000	—
Grading	Grading	10/20/2026	12/17/2026	5.00000	43.0000	—
Building Construction	Building Construction	12/2/2026	8/19/2027	5.00000	187.000	—

Paving	Paving	8/5/2027	9/20/2027	5.00000	33.0000	—
Architectural Coating	Architectural Coating	7/27/2027	9/20/2027	5.00000	40.0000	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Crawler Tractors	Diesel	Average	4.00000	8.00000	87.0000	0.43000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Grading	Crawler Tractors	Diesel	Average	2.00000	8.00000	87.0000	0.43000
Building Construction	Cranes	Diesel	Average	1.000000	8.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	8.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00000	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	13.0000	10.2000	HHDT,MHDT
Grading	Hauling	172.395	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	209.880	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	56.0000	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	10.00000	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	41.9760	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00000	0.00000	749,571	249,857	49,778.8

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5000	0.00000	0.00000
Grading	59,302.0	—	172.000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	19.0461

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	Unrefrigerated Warehouse-No Rail	0.00000	0%
Paving	Parking Lot	3.18000	100%
Paving	Other Non-Asphalt Surfaces	15.8661	0%
Paving	User Defined Industrial	0.00000	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00000	346.196	0.03300	0.00400

2027	0.00000	346.196	0.03300	0.00400

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790.048	390.776	368.789	245,583	14,396.9	7,121.04	6,720.37	4,475,203
Parking Lot	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
User Defined Industrial	114.934	56.9674	53.4694	35,723.5	3,502.05	1,735.80	1,629.21	1,088,495

5.10. Operational Area Sources

5.10.1. Hearths

Land Use	Hearth Type	Unmitigated (number)	Mitigated (number)
Unrefrigerated Warehouse-No Rail	Wood Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Gas Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Propane Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Electric Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	No Fireplaces	0	0
Unrefrigerated Warehouse-No Rail	Conventional Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Non-Catalytic Wood Stoves	0	0
Unrefrigerated Warehouse-No Rail	Pellet Wood Stoves	0	0
Parking Lot	Wood Fireplaces	0	0
Parking Lot	Gas Fireplaces	0	0

Parking Lot	Propane Fireplaces	0	0
Parking Lot	Electric Fireplaces	0	0
Parking Lot	No Fireplaces	0	0
Parking Lot	Conventional Wood Stoves	0	0
Parking Lot	Catalytic Wood Stoves	0	0
Parking Lot	Non-Catalytic Wood Stoves	0	0
Parking Lot	Pellet Wood Stoves	0	0
Other Non-Asphalt Surfaces	Wood Fireplaces	0	0
Other Non-Asphalt Surfaces	Gas Fireplaces	0	0
Other Non-Asphalt Surfaces	Propane Fireplaces	0	0
Other Non-Asphalt Surfaces	Electric Fireplaces	0	0
Other Non-Asphalt Surfaces	No Fireplaces	0	0
Other Non-Asphalt Surfaces	Conventional Wood Stoves	0	0
Other Non-Asphalt Surfaces	Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Non-Catalytic Wood Stoves	0	0
Other Non-Asphalt Surfaces	Pellet Wood Stoves	0	0
User Defined Industrial	Wood Fireplaces	0	0
User Defined Industrial	Gas Fireplaces	0	0
User Defined Industrial	Propane Fireplaces	0	0
User Defined Industrial	Electric Fireplaces	0	0
User Defined Industrial	No Fireplaces	0	0
User Defined Industrial	Conventional Wood Stoves	0	0
User Defined Industrial	Catalytic Wood Stoves	0	0
User Defined Industrial	Non-Catalytic Wood Stoves	0	0
User Defined Industrial	Pellet Wood Stoves	0	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0.00000	0.00000	749,571	249,857	49,778.8

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00000
Summer Days	day/yr	180.000

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,308,031	346.196	0.0330	0.0040	9,499,903
Parking Lot	121,344	346.196	0.0330	0.0040	0.00000
Other Non-Asphalt Surfaces	0.00000	346.196	0.0330	0.0040	0.00000
User Defined Industrial	0.00000	346.196	0.0330	0.0040	0.00000

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,558,863	6,774,392
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	469.731	0.00000
Parking Lot	0.00000	0.00000
Other Non-Asphalt Surfaces	0.00000	0.00000
User Defined Industrial	0.00000	0.00000

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.000000	1.000000	50.0000	700.000	0.73000
Fire Pump	Diesel	1.000000	1.000000	50.0000	300.000	0.73000

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6400	annual days of extreme heat
Extreme Precipitation	4.95000	annual days with precipitation above 20 mm
Sea Level Rise	0.00000	meters of inundation depth
Wildfire	22.7300	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.0516
AQ-PM	32.2215
AQ-DPM	57.8843
Drinking Water	29.7490
Lead Risk Housing	13.7996
Pesticides	0.00000
Toxic Releases	24.9687
Traffic	83.1125
Effect Indicators	—
CleanUp Sites	73.3669
Groundwater	0.00000
Haz Waste Facilities/Generators	65.9166
Impaired Water Bodies	0.00000
Solid Waste	0.00000

Sensitive Population	—
Asthma	84.5713
Cardio-vascular	99.4890
Low Birth Weights	5.81216
Socioeconomic Factor Indicators	—
Education	67.1222
Housing	11.2421
Linguistic	19.8674
Poverty	67.1734
Unemployment	82.7434

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Median HI	—
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541

Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3

Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0000

Healthy Places Index Score for Project Location (b)	42.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Based on client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, Building Construction, and Paving
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Lot Area	acre	4.33800	3.18000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	11/13/2026	10/1/2026
Site Preparation	Site Preparation	End Date	12/11/2026	10/19/2026
Site Preparation	Site Preparation	Work Days per Phase	20.0000	13.0000
Grading	Grading	Start Date	12/12/2026	10/20/2026
Grading	Grading	End Date	2/13/2027	12/17/2026
Grading	Grading	Work Days per Phase	45.0000	43.0000
Building Construction	Building Construction	Start Date	2/14/2027	12/2/2026
Building Construction	Building Construction	End Date	1/14/2029	8/19/2027
Building Construction	Building Construction	Work Days per Phase	500.000	187.000
Paving	Paving	Start Date	1/15/2029	8/5/2027
Paving	Paving	End Date	3/5/2029	9/20/2027
Paving	Paving	Work Days per Phase	35.0000	33.0000
Architectural Coating	Architectural Coating	Start Date	3/6/2029	7/27/2027
Architectural Coating	Architectural Coating	End Date	4/24/2029	9/20/2027
Architectural Coating	Architectural Coating	Work Days per Phase	35.0000	40.0000

8.4.2. Off-Road Equipment

Phase Name	Equipment Type	Model Parameter	Default Value	New Value

Building Construction	Cranes	Hours Per Day	7.00000	8.00000
Building Construction	Tractors/Loaders/Backhoes	Hours Per Day	7.00000	8.00000
Architectural Coating	Air Compressors	Hours Per Day	6.00000	8.00000

8.4.6. Trips and VMT

Phase Name	Trip Type	Model Parameter	Default Value	New Value
Building Construction	Vendor	One-Way Trips per Day	81.9031	56.0000

8.5. Operations

8.5.1. Mobile Sources

8.5.1.1. Vehicle Data

Land Use	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	Weekday Trip Rate	size/day	1.74000	1.58100
Unrefrigerated Warehouse-No Rail	Saturday Trip Rate	size/day	1.74000	0.78200
Unrefrigerated Warehouse-No Rail	Sunday Trip Rate	size/day	1.74000	0.73800
User Defined Industrial	Weekday Trip Rate	size/day	0.00000	0.23000
User Defined Industrial	Saturday Trip Rate	size/day	0.00000	0.11400
User Defined Industrial	Sunday Trip Rate	size/day	0.00000	0.10700
User Defined Industrial	Non-Res H-W Trip Length	miles	23.2027	30.4700
User Defined Industrial	Non-Res W-O Trip Length	miles	19.9619	0.00000
User Defined Industrial	Non-Res O-O Trip Length	miles	7.47372	0.00000
User Defined Industrial	Non-Res H-W Trip	%	60.8491	100.0000
User Defined Industrial	Non-Res W-O Trip	%	9.43396	0.00000
User Defined Industrial	Non-Res O-O Trip	%	29.7170	0.00000

8.5.1.2. Fleet Mix

Land Use	Season	Model Parameter	Units	Default Value	New Value
Unrefrigerated Warehouse-No Rail	A	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	A	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	A	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	A	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	A	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	A	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	A	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	A	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	S	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	S	Light-Duty Trucks 2	%	22%	23%

Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	S	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	S	Medium-Duty Trucks	%	16%	17%
Unrefrigerated Warehouse-No Rail	S	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	S	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	S	Urban Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Heavy-Heavy-Duty Trucks	%	2%	0%
Unrefrigerated Warehouse-No Rail	W	Passenger Cars	%	49%	53%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 1	%	4%	5%
Unrefrigerated Warehouse-No Rail	W	Light-Duty Trucks 2	%	22%	23%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 1	%	3%	0%
Unrefrigerated Warehouse-No Rail	W	Light Heavy-Duty Trucks 2	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Motorcycles	%	3%	3%
Unrefrigerated Warehouse-No Rail	W	Medium-Duty Trucks	%	16%	17%

Unrefrigerated Warehouse-No Rail	W	Motor Homes	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Medium-Heavy-Duty Trucks	%	1%	0%
Unrefrigerated Warehouse-No Rail	W	Other Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	School Buses	%	< 0.5%	0%
Unrefrigerated Warehouse-No Rail	W	Urban Buses	%	< 0.5%	0%
User Defined Industrial	A	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	A	Passenger Cars	%	49%	0%
User Defined Industrial	A	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	A	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	A	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	A	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	A	Motorcycles	%	3%	0%
User Defined Industrial	A	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	A	Motor Homes	%	1%	0%
User Defined Industrial	A	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	A	Other Buses	%	< 0.5%	0%
User Defined Industrial	A	School Buses	%	< 0.5%	0%
User Defined Industrial	A	Urban Buses	%	< 0.5%	0%
User Defined Industrial	S	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	S	Passenger Cars	%	49%	0%
User Defined Industrial	S	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	S	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	S	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	S	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	S	Motorcycles	%	3%	0%

User Defined Industrial	S	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	S	Motor Homes	%	1%	0%
User Defined Industrial	S	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	S	Other Buses	%	< 0.5%	0%
User Defined Industrial	S	School Buses	%	< 0.5%	0%
User Defined Industrial	S	Urban Buses	%	< 0.5%	0%
User Defined Industrial	W	Heavy-Heavy-Duty Trucks	%	2%	63%
User Defined Industrial	W	Passenger Cars	%	49%	0%
User Defined Industrial	W	Light-Duty Trucks 1	%	4%	0%
User Defined Industrial	W	Light-Duty Trucks 2	%	22%	0%
User Defined Industrial	W	Light Heavy-Duty Trucks 1	%	3%	13%
User Defined Industrial	W	Light Heavy-Duty Trucks 2	%	1%	4%
User Defined Industrial	W	Motorcycles	%	3%	0%
User Defined Industrial	W	Medium-Duty Trucks	%	16%	0%
User Defined Industrial	W	Motor Homes	%	1%	0%
User Defined Industrial	W	Medium-Heavy-Duty Trucks	%	1%	21%
User Defined Industrial	W	Other Buses	%	< 0.5%	0%
User Defined Industrial	W	School Buses	%	< 0.5%	0%
User Defined Industrial	W	Urban Buses	%	< 0.5%	0%

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Appendix H – Preliminary Hydrology Report

July 2022
2021-196

Hesperia Spec. Industrial
Industrial Buildings
City of Hesperia, CA

Preliminary Hydrology Report

Prepared For:
Rachamin 5, LLC
6001E Slauson Ave.
Commerce, CA 90040
Tel. (213) 769-4222

Prepared By:
WestLAND Group, Inc.
4150 Concours, Suite 100
Ontario, CA 91764
Tel: 909-989-9789

WestLAND Group, Inc.

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I. Purpose and Scope

The purpose of this preliminary study is to identify the mitigation measures that must be implemented during final design in order to ensure that the project does not have adverse impacts to downstream properties. The project will develop a conceptual storm drain infrastructure plan that will demonstrate how the project will flood protect the project as required by the City of Hesperia, San Bernardino County, and FEMA regulations and policies.

This study evaluates the Post-Development Hydrological Conditions and provides the criteria for the design of the on-site storm drain systems for flood protection of the proposed structures. In the design of the storm drain system, the project performed storm drain alternative assessments and evaluated the following:

1. The ultimate storm drain solution identified as part of the Victorville Master Drainage Plan prepared by the County of San Bernardino
2. A project stand-alone solution due to the timing to implement the solution from the Victorville Master Drainage Plan

When evaluating the solution identified in the Victorville Master Drainage Plan, the following challenges were identified that make it impractical:

1. Availability of Right of Ways
2. The viability of constructing the regional basin
3. Design coordination with DWR
4. Impacts to timing and financial impacts to the project

Therefore, in the case of downstream infrastructure being absent, the guidelines established in the San Bernardino County Basin Design criteria must be met for this project.

The scope of the study includes the following:

1. Evaluate three alternatives to satisfying drainage requirements.
    a. Alternative 1 is to implement the solution identified in the Victorville MDP. However, this is not feasible due to the challenges listed previously.
    b. Alternative 2 is to release runoff from the site at a rate that does not exceed the allowable flow rate, which is equivalent to the 90% of the pre-development flow rate for a 100-year storm. To obtain the allowable flow rate, the 100-year storm for pre-development conditions is modelled as a 25-year storm per the San Bernardino County Detention Basin Guidelines.
    c. Alternative 3 is to retain the entire post-development runoff volume for a 100-year storm onsite.
2. Perform 100-year rational method calculations as outlined in the San Bernardino County Flood Control Hydrology Manual.
3. Determine peak flow rates tributary to the mainline systems.
4. Size the infiltration/retention basin using the volumes determined from the unit hydrograph calculations.
5. Preparation of a report, which consists of hydrological and hydraulic results, as well as supporting exhibits.

II. Project Site and Drainage Area Overview

The proposed site is an industrial development located near the northwest corner of Palmeto Way and Amargosa Rd in Hesperia, California. The project site is bounded by roads and can be located with the provided information below:

- South of Avenal St
- East of Amargosa Rd
- North of Palmeto Way

The site consists of several parcels both irregular and rectangular in shape which approximate to 31 acres, and part of the project will include offsite street improvements along the frontage of the project on Yucca Terrace, Phelan Road, and a portion of Highway 395. The site is entirely vacant and undeveloped and surrounded by mostly paved/dirt roads. The existing natural cover consists primarily of shrubs, native bushes and trees throughout the site. The highest elevation per survey data is located on the south westerly corner of the project site. The majority of the site will sheet flow towards the northerly east corner of the project site. Overall, the site depicts slopes of approximately 2± percent towards the northerly east corner of the project site. Existing drainage patterns can be seen in the “Pre-Developed Condition Exhibit” in Appendix C.

The proposed site is considered an industrial development, and flows will be collected through nearby catch basins and conveyed to either an above ground or underground infiltration/retention basin via a storm drain system.

The project proposes to construct one building that will be used for industrial and commercial purposes. The project will have its dedicated parking areas and truck docking areas. In addition, for water quality purposes, the project proposes a storm drain system to convey stormwater to infiltration/retention basins. Since infiltration is a priority for water quality purposes and is needed to meet the WQMP hierarchy, the project will use a combination of an above ground infiltration basin and underground CMP infiltration basin to treat the stormwater runoff for water quality purposes.

As discussed previously, there are three alternatives to managing stormwater runoff. The first alternative is to follow the solution identified in the Victorville MDP and discharge to the regional basin. However, due to challenges such as the regional basin not yet being constructed along with the Right of Way issues mentioned previously, there are timing and financial impacts that makes this alternative infeasible.

Therefore, the second alternative of releasing runoff at a rate no greater than the 25-year pre-project flow rate is evaluated. However, if this alternative were to be implemented, the flow condition in the post-development conditions will be altered from sheet flow to concentrated flow. This will result in the potential for erosion downstream of the project site and will not comply with California Drainage Law which states that there cannot be a net increase in flow and velocity. In addition, there are additional challenges such as a lack of Right of Way to discharge the flows, future liability from downstream property owners that may experience flooding due to the project discharging runoff, and the creation of future environmental habitat on offsite properties due to the concentration of flows. As a result of these challenges, the project proposes to retain the entire runoff volume for up to a 100-year storm event.

III. Methodology

The San Bernardino County Hydrology Manual, was used to develop the hydrological parameters for the hydrology analysis. The rational method was used in order to perform a hydrological analysis for the proposed project conditions. The proposed development will be designed to prevent flooding for the 100-year storm.

Peak flow rate was calculated using the Rational Method calculation as outlined in the San Bernardino County Hydrology Manual (Equation D.4)

$$Q= 0.90(I-F_m)*A$$

- 100-year AMC III
- Soil Type B
- Manning's Values Used:
    - o Existing Surface n=0.030
- Project is located in the "Desert" area

IV. Hydrology

The rainfall depths used in the hydrology calculations are as follows:

Storm Event & Duration	Rainfall (inches)
2-Year, 1-Hour	0.433
2-Year, 6-Hour	1.01
2-Year, 24-Hour	1.89
10-Year, 1-Hour	0.747
100-Year, 1-Hour	1.25
100-Year, 6-Hour	2.81
100-Year, 24-Hour	5.90

The rainfall depths were obtained from NOAA Atlas 14, which is included as part of Appendix F.

As discussed previously, the project evaluated three alternatives. However, the alternative to implement the solution identified in the Victorville MDP was eliminated due to the timing required to implement the solution due to the right of way constraints, regional hydrology studies, multi-agency coordination and financial burdens on the project. This resulted in the project to focus on the following alternatives:

1. Release runoff from the site at a rate that does not exceed 90% of the pre-development flow rate for a 25-year storm per the San Bernardino County Detention Basin Guidelines.
2. Retain the entire post-development runoff volume for a 100-year storm onsite.

For alternative 1 to be viable, the following needs to be met:

1. California Drainage Law which states that there cannot be a net increase in flow and velocity
2. The maximum outflow cannot be exceeded
3. The drainage infrastructures must be located within easements or right of ways

If alternative 1 were to be chosen, runoff would be released at a concentrated flow rate which increases the flow velocity and may cause erosion at the ditch downstream of the project site. This would therefore go against the California Drainage Law. In addition, since runoff would be discharged offsite into an adjacent property, there are additional concerns regarding easements and right of way that would allow us to discharge the runoff onto an adjacent property. Due to the concerns regarding the California Drainage Law and the easement and right of way issues, alternative 1 was deemed to be infeasible.

After assessing alternative 1 and the issues regarding timing, liability, and risk, alternative 2 was evaluated since it is easily demonstrated that this has lower risk and liability, and the client understands that there is a higher cost to implement. This alternative proposes to retain the entire post-development runoff onsite and is the option that the project will be using to satisfy the drainage requirements.

The proposed site was divided in subareas based on the proposed drainage patterns in order to better analyze the runoff produced throughout each area. Below is a summary of the results.

HYDROLOGY SUMMARY						
AREA ID	AREA (AC)	TC (MIN)	Q_{100} (CFS)	V_{100} (CF)	Retention Provided (CF)	Total V Provided (CF)
A	6.29	10	16.5	117,301	600,000	600,000 min
B	19.08	10	50.2	379,213		
C	6.22	10	15.9	81,068		
TOTAL	31.59		82.9	582,327		

BASIN SUMMARY TABLE		
BASIN ID	**RETENTION VOLUME**	**TOTAL VOLUME**
ABOVE GROUND BASIN	295,000 CF	295,000 CF min
UNDERGROUND INFILTRATION BASIN	305,000 CF	305,000 CF min
TOTAL	**600,000 CF**	**600,000 CF min**

Regarding the subsurface design, the project includes a CDS hydrodynamic separator to eliminate sediments, debris, and trash from entering the infiltration chambers to help ensure long term infiltration of the systems and reduce the risk of infiltration degradation. Runoff will be collected through nearby catch basins and first pretreated through inlet filters placed on each catch basin. Further downstream, the runoff will be further pretreated through the CDS hydrodynamic separator, and ultimately be discharged into either an above ground or underground infiltration system. For more information, please see the exhibit for Post-Developed conditions in Appendix C.

Per the infiltration study provided by Southern California Geotechnical, Inc, the site has sufficient infiltration rates to drawdown within 24 hours after the storm event. In particular, the infiltration rate was measured to be 17 in/hr. Applying a safety factor of 2 results in an effective infiltration rate of 8.5 in/hr which will be enough to completely drain the 144in CMP systems within 24 hours. A safety factor of 2 was selected due to in situ testing having been performed by Southern California Geotechnical, Inc. Southern California Geotechnical, Inc. has also been contacted to verify that the infiltration rates measured are accurate. For more information, please see the memo in Appendix D.

V. Conclusion

The project evaluated three alternatives to satisfying drainage requirements.

1. Alternative 1 is to implement the solution identified in the Victorville MDP. However, this is not feasible due to the challenges with timing.
2. Alternative 2 is to release runoff from the site at a rate that does not exceed the allowable flow rate, which is equivalent to the 90% of the pre-development flow rate for a 100-year storm. To obtain the allowable flow rate, the 100-year storm for pre-development conditions is modelled as a 25-year storm per the San Bernardino County Detention Basin Guidelines.
3. Alternative 3 is to retain the entire post-development runoff volume for a 100-year storm onsite.

As previously discussed, alternative 1 is not viable due to the timing of the regional basin. Therefore, only alternative 2 and 3 are considered to be viable solutions. However, for alternative 2, there are risks and impacts that also make it an inviable solution. In particular, runoff would be released at a concentrated flow rate which increases the flow velocity and may cause erosion at the ditch downstream of the project site. This would therefore go against the California Drainage Law. In addition, since runoff would be discharged offsite into an adjacent property, there are additional concerns regarding easements and right of way that would allow us to discharge the runoff onto an adjacent property.

Due to these concerns, the most viable option was evaluated to be alternative 3, which is to provide full retention onsite. Therefore, proposed development will provide enough volume to capture the entire runoff volume generated from a 100-year storm event and will not release any runoff off-site for up to a 100-year storm event. To store the volume, the development proposes a combination of above ground and underground infiltration/retention basins. Since the development will not release runoff off-site, the development will not negatively impact downstream conditions. The results demonstrate that the proposed on-site storm drain system and above ground and underground infiltration/retention basins will comply with the flood protection and WQMP requirements of the City of Hesperia and County of San Bernardino.

Appendix A

HYDROLOGY SUMMARY				
ID	**AREA A**	**AREA B**	**AREA C**	**TOTAL SITE**
AREA, SF	273992	831125	270943	1376060
ACRES	6.29	19.08	6.22	31.59
PERVIOUS	0.19	0.10	0.52	0.20
IMPERVIOUS	0.81	0.90	0.48	0.80
TIME OF CONCENTRATION, MIN	10	10	10	10
P_{24}	5.9	5.9	5.9	5.9
CN	79	84	60	78
AMC III CN	93	96	79	93
S	0.70	0.37	2.66	0.76
I_a	0.14	0.07	0.53	0.15
Y	0.87	0.93	0.61	0.86
I_{25}, IN/HR	2.21	2.21	2.21	2.21
I_{100}, IN/HR	2.93	2.93	2.93	2.93
Fp	0.04	0.02	0.16	0.05
Fm	0.01	0.00	0.08	0.01
Ybar	0.13	0.07	0.39	0.14
Q-25, CFS	12.5	38.0	11.9	62.6
Q-100, CFS	16.5	50.2	15.9	82.9
VOLUME (P=4.28IN 25YR-24HR), CF	85093	275090	58809	422434
VOLUME (P=5.90IN 100YR-24HR), CF	117301	379213	81068	582327

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
25-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 25.0
Computed rainfall intensity:
Storm year = 25.00 1 hour rainfall = 0.942 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.139(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      3.479(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.864
      Subarea runoff =     18.908(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.139(In/Hr)
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      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ____________________________________________________________________
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    18.908(CFS)
      Nearest computed pipe diameter  =     24.00(In.)
      Calculated individual pipe flow  =    18.908(CFS)
      Normal flow depth in pipe =   19.31(In.)
      Flow top width inside pipe =   19.03(In.)
      Critical Depth =   18.77(In.)
      Pipe flow velocity =      6.97(Ft/s)
      Travel time through pipe =    3.31 min.
      Time of concentration (TC) =    12.59 min.
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      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.073(In/Hr)
      Time of concentration =    12.59 min.
      Rainfall intensity =      2.810(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.871
      Subarea runoff =     43.201(CFS) for   19.080(Ac.)
      Total runoff =     62.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.090(In/Hr)
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      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    62.109(CFS)
      Nearest computed pipe diameter  =     33.00(In.)
      Calculated individual pipe flow  =    62.109(CFS)
      Normal flow depth in pipe =   25.27(In.)
      Flow top width inside pipe =   27.96(In.)
      Critical Depth =   30.18(In.)
      Pipe flow velocity =     12.74(Ft/s)
      Travel time through pipe =    0.88 min.
      Time of concentration (TC) =    13.47 min.
```

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      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.382(In/Hr)
      Time of concentration =    13.47 min.
      Rainfall intensity =      2.680(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.851
      Subarea runoff =      9.891(CFS) for    6.220(Ac.)
      Total runoff =     72.000(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.147(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
100-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.250 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.084(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      4.617(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
      Subarea runoff =     25.664(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.084(In/Hr)
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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
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      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    25.664(CFS)
      Nearest computed pipe diameter  =     27.00(In.)
      Calculated individual pipe flow  =    25.664(CFS)
      Normal flow depth in pipe =   21.56(In.)
      Flow top width inside pipe =   21.66(In.)
      Critical Depth =   21.24(In.)
      Pipe flow velocity =      7.54(Ft/s)
      Travel time through pipe =    3.06 min.
      Time of concentration (TC) =    12.34 min.
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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
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      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.044(In/Hr)
      Time of concentration =    12.34 min.
      Rainfall intensity =      3.781(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.887
      Subarea runoff =     59.445(CFS) for   19.080(Ac.)
      Total runoff =     85.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.054(In/Hr)
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      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    85.109(CFS)
      Nearest computed pipe diameter  =     39.00(In.)
      Calculated individual pipe flow  =    85.109(CFS)
      Normal flow depth in pipe =   26.86(In.)
      Flow top width inside pipe =   36.12(In.)
      Critical Depth =   34.49(In.)
      Pipe flow velocity =     13.98(Ft/s)
      Travel time through pipe =    0.80 min.
      Time of concentration (TC) =    13.15 min.
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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.229(In/Hr)
      Time of concentration =    13.15 min.
      Rainfall intensity =      3.618(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.878
      Subarea runoff =     15.238(CFS) for    6.220(Ac.)
      Total runoff =    100.347(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.088(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 07/15/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6277

2021-196 Hesperia Spec Industrial
Unit Hydrograph
100-year

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
0.01	1	0.75
Rainfall data for year 2		
0.01	6	1.01
Rainfall data for year 2		
0.01	24	1.89

```
--
      Rainfall data for year 100
                0.01            1           1.25
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01            6           2.81
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01           24           5.90
      ------------------------------------------------------------------
--
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++

      ******** Area-averaged max loss rate, Fm ********


      SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap
Fm
      No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)
(In/Hr)
       56.0      75.8         31.59      1.000     0.440    0.200
0.088

      Area-averaged adjusted loss rate Fm (In/Hr) =  0.088

      ********* Area-Averaged low loss rate fraction, Yb **********

      Area       Area          SCS CN    SCS CN      S     Pervious
       (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
           6.32   0.200         56.0      75.8       3.19     0.555
          25.27   0.800         98.0      98.0       0.20     0.960

      Area-averaged catchment yield fraction, Y =  0.879
      Area-averaged low loss fraction, Yb =  0.121
      User entry of time of concentration  =   0.227 (hours)
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
      Watershed area =      31.59(Ac.)
      Catchment Lag time =   0.182 hours
      Unit interval =   5.000 minutes
      Unit interval percentage of lag time = 45.8884
      Hydrograph baseflow =     0.00(CFS)
      Average maximum watershed loss rate(Fm) =  0.088(In/Hr)
      Average low loss rate fraction (Yb) = 0.121 (decimal)
      MOUNTAIN S-Graph Selected
      Computed peak 5-minute rainfall =  0.593(In)
      Computed peak 30-minute rainfall =  1.015(In)
      Specified peak 1-hour rainfall =  1.250(In)
      Computed peak 3-hour rainfall =  2.054(In)
      Specified peak 6-hour rainfall =  2.810(In)
      Specified peak 24-hour rainfall =  5.900(In)
```

```
      Rainfall depth area reduction factors:
      Using a total area of      31.59(Ac.) (Ref: fig. E-4)

      5-minute factor = 0.999     Adjusted rainfall =  0.592(In)
      30-minute factor = 0.999    Adjusted rainfall =  1.014(In)
      1-hour factor = 0.999       Adjusted rainfall =  1.248(In)
      3-hour factor = 1.000       Adjusted rainfall =  2.054(In)
      6-hour factor = 1.000       Adjusted rainfall =  2.810(In)
      24-hour factor = 1.000      Adjusted rainfall =  5.900(In)
      ------------------------------------------------------------------
---

                     U n i t  H y d r o g r a p h
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+++
      Interval          'S' Graph          Unit Hydrograph
      Number            Mean values             ((CFS))
      ------------------------------------------------------------------
---
                (K =       382.04 (CFS))

        1                6.828                  26.086
        2               34.241                 104.729
        3               53.812                  74.769
        4               63.412                  36.675
        5               69.929                  24.899
        6               74.936                  19.129
        7               78.803                  14.773
        8               81.823                  11.537
        9               84.264                   9.327
       10               86.308                   7.807
       11               88.171                   7.119
       12               89.787                   6.173
       13               91.208                   5.430
       14               92.506                   4.960
       15               93.668                   4.438
       16               94.719                   4.017
       17               95.623                   3.454
       18               96.455                   3.176
       19               97.281                   3.156
       20               98.107                   3.156
       21               98.933                   3.156
       22              100.000                   1.578
      ------------------------------------------------------------------
---
      ------------------------------------------------------------------
--
      ------------------------------------------------------------------
--
      Total soil rain loss =      0.64(In)
      Total effective rainfall =      5.26(In)
      Peak flow rate in flood hydrograph =     81.24(CFS)
      ------------------------------------------------------------------
---
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
```

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	22.5	45.0	67.5	90.0
0+ 5	0.0017	0.25	Q				
0+10	0.0104	1.26	Q				
0+15	0.0241	1.98	Q				
0+20	0.0402	2.34	VQ				
0+25	0.0581	2.59	VQ				
0+30	0.0772	2.78	VQ				
0+35	0.0974	2.93	VQ				
0+40	0.1184	3.05	VQ				
0+45	0.1400	3.14	VQ				
0+50	0.1622	3.23	VQ				
0+55	0.1850	3.30	VQ				
1+ 0	0.2082	3.37	VQ				
1+ 5	0.2319	3.43	VQ				
1+10	0.2559	3.49	VQ				
1+15	0.2803	3.54	VQ				
1+20	0.3050	3.59	VQ				
1+25	0.3300	3.63	VQ				
1+30	0.3553	3.67	|Q				
1+35	0.3809	3.71	|Q				
1+40	0.4067	3.75	|Q				
1+45	0.4328	3.79	|Q				
1+50	0.4591	3.82	|Q				

1+55	0.4855	3.83	|Q	|	|	|
2+ 0	0.5119	3.84	|Q	|	|	|
2+ 5	0.5384	3.85	|Q	|	|	|
2+10	0.5650	3.86	|Q	|	|	|
2+15	0.5917	3.87	|Q	|	|	|
2+20	0.6184	3.88	|Q	|	|	|
2+25	0.6452	3.89	|Q	|	|	|
2+30	0.6721	3.90	|Q	|	|	|
2+35	0.6990	3.91	|QV	|	|	|
2+40	0.7260	3.92	|QV	|	|	|
2+45	0.7531	3.93	|QV	|	|	|
2+50	0.7803	3.95	|QV	|	|	|
2+55	0.8076	3.96	|QV	|	|	|
3+ 0	0.8349	3.97	|QV	|	|	|
3+ 5	0.8623	3.98	|QV	|	|	|
3+10	0.8898	3.99	|QV	|	|	|
3+15	0.9174	4.00	|QV	|	|	|
3+20	0.9450	4.02	|QV	|	|	|
3+25	0.9728	4.03	|QV	|	|	|
3+30	1.0006	4.04	|QV	|	|	|
3+35	1.0285	4.05	|QV	|	|	|
3+40	1.0565	4.06	|Q V	|	|	|
3+45	1.0845	4.08	|Q V	|	|	|
3+50	1.1127	4.09	|Q V	|	|	|
3+55	1.1410	4.10	|Q V	|	|	|
4+ 0	1.1693	4.11	|Q V	|	|	|
4+ 5	1.1977	4.13	|Q V	|	|	|
4+10	1.2262	4.14	|Q V	|	|	|

4+15	1.2548	4.15	|Q V	|	|	|
4+20	1.2835	4.17	|Q V	|	|	|
4+25	1.3123	4.18	|Q V	|	|	|
4+30	1.3412	4.19	|Q V	|	|	|
4+35	1.3702	4.21	|Q V	|	|	|
4+40	1.3993	4.22	|Q V	|	|	|
4+45	1.4284	4.24	|Q V	|	|	|
4+50	1.4577	4.25	|Q V	|	|	|
4+55	1.4871	4.26	|Q V	|	|	|
5+ 0	1.5165	4.28	|Q V	|	|	|
5+ 5	1.5461	4.29	|Q V	|	|	|
5+10	1.5758	4.31	|Q V	|	|	|
5+15	1.6055	4.32	|Q V	|	|	|
5+20	1.6354	4.34	|Q V	|	|	|
5+25	1.6654	4.35	|Q V	|	|	|
5+30	1.6955	4.37	|Q V	|	|	|
5+35	1.7257	4.38	|Q V	|	|	|
5+40	1.7560	4.40	|Q V	|	|	|
5+45	1.7864	4.42	|Q V	|	|	|
5+50	1.8169	4.43	|Q V	|	|	|
5+55	1.8475	4.45	|Q V	|	|	|
6+ 0	1.8783	4.47	|Q V	|	|	|
6+ 5	1.9092	4.48	|Q V	|	|	|
6+10	1.9401	4.50	|Q V	|	|	|
6+15	1.9712	4.52	| Q V	|	|	|
6+20	2.0025	4.53	| Q V	|	|	|
6+25	2.0338	4.55	| Q V	|	|	|
6+30	2.0653	4.57	| Q V	|	|	|

6+35	2.0969	4.59	Q	V			
6+40	2.1286	4.60	Q	V			
6+45	2.1604	4.62	Q	V			
6+50	2.1924	4.64	Q	V			
6+55	2.2245	4.66	Q	V			
7+ 0	2.2567	4.68	Q	V			
7+ 5	2.2891	4.70	Q	V			
7+10	2.3216	4.72	Q	V			
7+15	2.3542	4.74	Q	V			
7+20	2.3870	4.76	Q	V			
7+25	2.4199	4.78	Q	V			
7+30	2.4530	4.80	Q	V			
7+35	2.4862	4.82	Q	V			
7+40	2.5195	4.84	Q	V			
7+45	2.5530	4.86	Q	V			
7+50	2.5867	4.89	Q	V			
7+55	2.6205	4.91	Q	V			
8+ 0	2.6544	4.93	Q	V			
8+ 5	2.6886	4.95	Q	V			
8+10	2.7228	4.98	Q	V			
8+15	2.7573	5.00	Q	V			
8+20	2.7919	5.03	Q	V			
8+25	2.8267	5.05	Q	V			
8+30	2.8616	5.07	Q	V			
8+35	2.8967	5.10	Q	V			
8+40	2.9320	5.12	Q	V			
8+45	2.9675	5.15	Q	V			
8+50	3.0032	5.18	Q	V			

8+55	3.0390	5.20	Q	V			
9+ 0	3.0750	5.23	Q	V			
9+ 5	3.1112	5.26	Q	V			
9+10	3.1476	5.29	Q	V			
9+15	3.1842	5.31	Q	V			
9+20	3.2211	5.34	Q	V			
9+25	3.2581	5.37	Q	V			
9+30	3.2953	5.40	Q	V			
9+35	3.3327	5.43	Q	V			
9+40	3.3704	5.47	Q	V			
9+45	3.4082	5.50	Q	V			
9+50	3.4463	5.53	Q	V			
9+55	3.4846	5.56	Q	V			
10+ 0	3.5232	5.60	Q	V			
10+ 5	3.5619	5.63	Q	V			
10+10	3.6010	5.67	Q	V			
10+15	3.6402	5.70	Q	V			
10+20	3.6797	5.74	Q	V			
10+25	3.7195	5.77	Q	V			
10+30	3.7595	5.81	Q	V			
10+35	3.7998	5.85	Q	V			
10+40	3.8404	5.89	Q	V			
10+45	3.8813	5.93	Q	V			
10+50	3.9224	5.97	Q	V			
10+55	3.9638	6.01	Q	V			
11+ 0	4.0055	6.06	Q	V			
11+ 5	4.0476	6.10	Q	V			
11+10	4.0899	6.15	Q	V			

11+15	4.1326	6.19	Q	V		
11+20	4.1755	6.24	Q	V		
11+25	4.2188	6.29	Q	V		
11+30	4.2625	6.34	Q	V		
11+35	4.3065	6.39	Q	V		
11+40	4.3509	6.44	Q	V		
11+45	4.3956	6.49	Q	V		
11+50	4.4407	6.55	Q	V		
11+55	4.4862	6.61	Q	V		
12+ 0	4.5321	6.67	Q	V		
12+ 5	4.5779	6.65	Q	V		
12+10	4.6221	6.42	Q	V		
12+15	4.6653	6.27	Q	V		
12+20	4.7082	6.23	Q	V		
12+25	4.7510	6.22	Q	V		
12+30	4.7940	6.24	Q	V		
12+35	4.8372	6.27	Q	V		
12+40	4.8806	6.31	Q	V		
12+45	4.9244	6.36	Q	V		
12+50	4.9686	6.42	Q	V		
12+55	5.0133	6.48	Q	V		
13+ 0	5.0584	6.55	Q	V		
13+ 5	5.1040	6.62	Q	V		
13+10	5.1501	6.70	Q	V		
13+15	5.1969	6.78	Q	V		
13+20	5.2442	6.88	Q	V		
13+25	5.2922	6.97	Q	V		
13+30	5.3409	7.07	Q	V		

13+35	5.3903	7.18	Q	V		
13+40	5.4406	7.29	Q	V		
13+45	5.4916	7.41	Q	V		
13+50	5.5435	7.54	Q	V		
13+55	5.5963	7.67	Q	V		
14+ 0	5.6502	7.83	Q	V		
14+ 5	5.7052	7.98	Q	V		
14+10	5.7613	8.16	Q	V		
14+15	5.8187	8.33	Q	V		
14+20	5.8774	8.53	Q	V		
14+25	5.9375	8.72	Q	V		
14+30	5.9991	8.94	Q	V		
14+35	6.0623	9.17	Q	V		
14+40	6.1272	9.43	Q	V		
14+45	6.1939	9.69	Q	V		
14+50	6.2627	9.99	Q	V		
14+55	6.3336	10.30	Q	V		
15+ 0	6.4071	10.66	Q	V		
15+ 5	6.4831	11.04	Q	V		
15+10	6.5623	11.49	Q	V		
15+15	6.6447	11.97	Q	V		
15+20	6.7311	12.54	Q	V		
15+25	6.8192	12.79	Q	V		
15+30	6.9024	12.08	Q	V		
15+35	6.9840	11.84	Q	V		
15+40	7.0691	12.36	Q	V		
15+45	7.1603	13.25	Q	V		
15+50	7.2622	14.79	Q	V		

| | | |

18+15	11.3300	6.96	Q			V
18+20	11.3774	6.89	Q			V
18+25	11.4242	6.80	Q			V
18+30	11.4704	6.70	Q			V
18+35	11.5158	6.60	Q			V
18+40	11.5606	6.50	Q			V
18+45	11.6048	6.41	Q			V
18+50	11.6483	6.32	Q			V
18+55	11.6912	6.23	Q			V
19+ 0	11.7335	6.15	Q			V
19+ 5	11.7753	6.06	Q			V
19+10	11.8165	5.99	Q			V
19+15	11.8572	5.91	Q			V
19+20	11.8974	5.84	Q			V
19+25	11.9372	5.77	Q			V
19+30	11.9764	5.70	Q			V
19+35	12.0153	5.64	Q			V
19+40	12.0537	5.58	Q			V
19+45	12.0917	5.52	Q			V
19+50	12.1293	5.46	Q			V
19+55	12.1665	5.40	Q			V
20+ 0	12.2032	5.34	Q			V
20+ 5	12.2396	5.28	Q			V
20+10	12.2756	5.22	Q			V
20+15	12.3112	5.17	Q			V
20+20	12.3464	5.12	Q			V
20+25	12.3813	5.07	Q			V
20+30	12.4158	5.02	Q			V

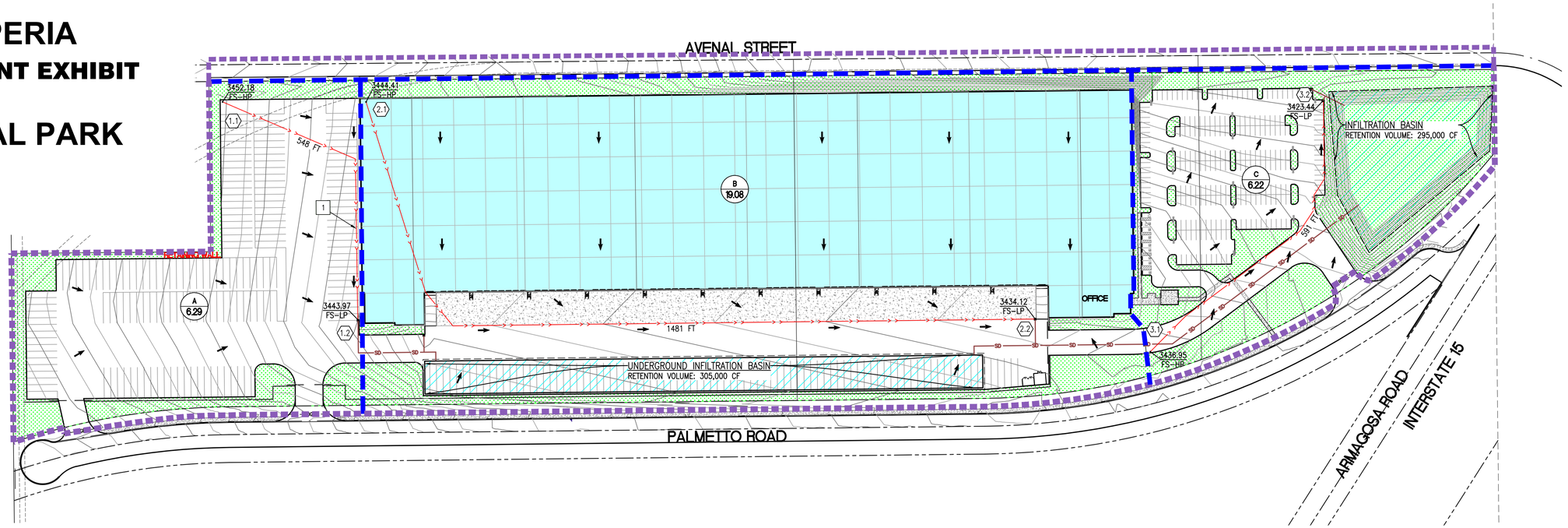
20+35	12.4500	4.97	Q				V
20+40	12.4839	4.92	Q				V
20+45	12.5175	4.88	Q				V
20+50	12.5508	4.83	Q				V
20+55	12.5838	4.79	Q				V
21+ 0	12.6165	4.75	Q				V
21+ 5	12.6490	4.71	Q				V
21+10	12.6812	4.67	Q				V
21+15	12.7131	4.63	Q				V
21+20	12.7447	4.60	Q				V
21+25	12.7761	4.56	Q				V
21+30	12.8073	4.52	Q				V
21+35	12.8382	4.49	Q				V
21+40	12.8689	4.46	Q				V
21+45	12.8994	4.42	Q				V
21+50	12.9296	4.39	Q				V
21+55	12.9596	4.36	Q				V
22+ 0	12.9894	4.33	Q				V
22+ 5	13.0191	4.30	Q				V
22+10	13.0485	4.27	Q				V
22+15	13.0777	4.24	Q				V
22+20	13.1067	4.21	Q				V
22+25	13.1355	4.19	Q				V
22+30	13.1642	4.16	Q				V
22+35	13.1926	4.13	Q				V
22+40	13.2209	4.11	Q				V
22+45	13.2490	4.08	Q				V
22+50	13.2770	4.06	Q				V

```
   22+55      13.3047      4.03  |Q        |         |         |        V
|
   23+ 0      13.3323      4.01  |Q        |         |         |        V
|
   23+ 5      13.3598      3.98  |Q        |         |         |        V
|
   23+10      13.3871      3.96  |Q        |         |         |        V
|
   23+15      13.4142      3.94  |Q        |         |         |        V
|
   23+20      13.4412      3.92  |Q        |         |         |
V|
   23+25      13.4680      3.89  |Q        |         |         |
V|
   23+30      13.4947      3.87  |Q        |         |         |
V|
   23+35      13.5212      3.85  |Q        |         |         |
V|
   23+40      13.5476      3.83  |Q        |         |         |
V|
   23+45      13.5738      3.81  |Q        |         |         |
V|
   23+50      13.5999      3.79  |Q        |         |         |
V|
   23+55      13.6259      3.77  |Q        |         |         |
V|
   24+ 0      13.6518      3.75  |Q        |         |         |
V|
   24+ 5      13.6757      3.48  |Q        |         |         |
V|
   24+10      13.6926      2.46  |Q        |         |         |
V|
   24+15      13.7045      1.72  Q         |         |         |
V|
   24+20      13.7139      1.36  Q         |         |         |
V|
   24+25      13.7216      1.12  Q         |         |         |
V|
   24+30      13.7280      0.93  Q         |         |         |
V|
   24+35      13.7333      0.78  Q         |         |         |
V|
   24+40      13.7379      0.66  Q         |         |         |
V|
   24+45      13.7418      0.57  Q         |         |         |
V|
   24+50      13.7452      0.49  Q         |         |         |
V|
   24+55      13.7481      0.42  Q         |         |         |
V|
   25+ 0      13.7506      0.36  Q         |         |         |
V|
   25+ 5      13.7527      0.31  Q         |         |         |
V|
   25+10      13.7545      0.26  Q         |         |         |
V|
```

```
   25+15      13.7559      0.21  Q         |         |         |
V|
   25+20      13.7571      0.17  Q         |         |         |
V|
   25+25      13.7581      0.14  Q         |         |         |
V|
   25+30      13.7588      0.11  Q         |         |         |
V|
   25+35      13.7594      0.08  Q         |         |         |
V|
   25+40      13.7597      0.05  Q         |         |         |
V|
   25+45      13.7598      0.02  Q         |         |         |
V
------------------------------------------------------------------------
```

Appendix B

CITY OF HESPERIA
POST DEVELOPMENT EXHIBIT
FOR
SPEC INDUSTRIAL PARK



HYDROLOGY INFORMATION

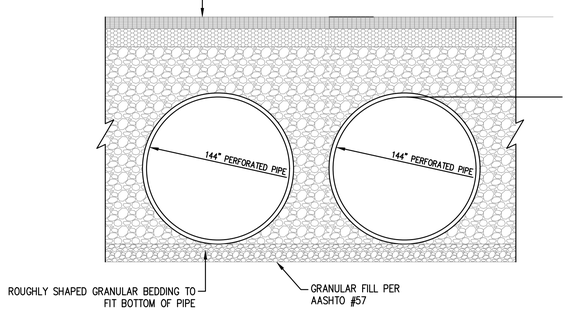
SITE AREA:	31± ACRES	
SOIL GROUP:	B	(PER USDA WEB SOIL SURVEY)
IMPERVIOUS:	80%	(PER CALCULATIONS)
ISOHYETALS:	0.433" 1.25"	(2-YEAR 1 HOUR) (100-YEAR 1 HOUR)
CN NUMBER:	78	(SOIL GROUP B)
FREQUENCY:	100 YEAR 2/10 YEAR	(FOR STORM DRAIN DESIGN) (FOR WATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

LEGEND:

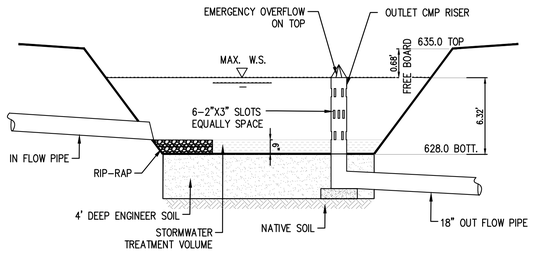
- DRAINAGE AREA/SITE BOUNDARY
- DRAINAGE SUB-AREA BOUNDARY
- STORM WATER FLOW PATH
- PROPOSED STORM DRAIN PIPE
- PROPOSED FLOW DIRECTION ARROW
- DRAINAGE AREA DESIGNATION (X / XXX) AREA(AC)
- NODE (US/DS) (X.X)
- STREAM # (3)
- PROPOSED UNDERGROUND INFILTRATION/DETENTION
- PROPOSED BUILDING
- PROPOSED LANDSCAPING

DRAINAGE NOTES:

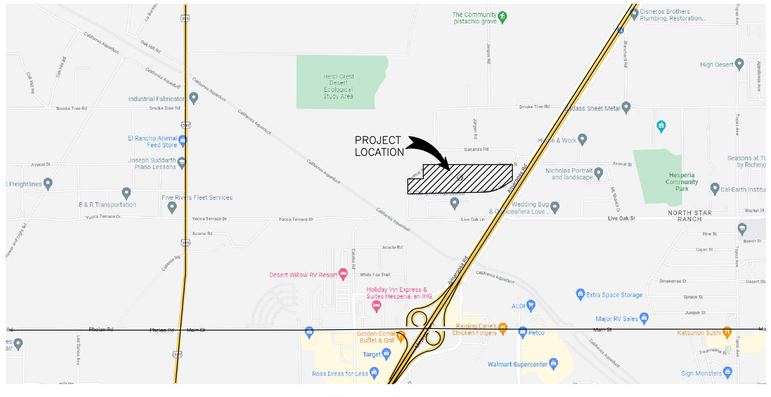
1. PROPOSED STORM DRAIN INLET
2. PROPOSED STORM DRAIN
3. PROPOSED INFILTRATION/DETENTION BASIN
4. PROPOSED UNDERGROUND INFILTRATION CMP



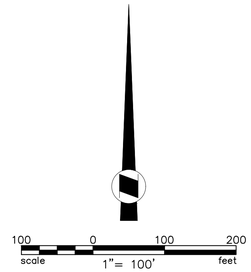
TYPICAL CMP UNDERGROUND INFILTRATION DETAIL
N.T.S



INFILTRATION/DETENTION BASIN-3 DETAIL
N.T.S



VICINITY MAP
N.T.S



PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2019-185

HCCII INDUSTRIAL PARK
HYDROLOGY EXHIBIT

CITY OF HESPERIA

DATE: DEC 2021
SHEET 1 OF 1

Drawing Name: P:\Year_2021\2021-196 Hesperia Industrial - RDA - Chris Sovage\06 Engineering\Reports\Hydrology\3_Exhibits\2021-196_Hydro_Exhibit_Post.dwg
Last Opened: Jul 06, 2022 - 9:28pm by: lucas.glauser

Appendix C

NOAA Atlas 14, Volume 6, Version 2
Location name: Hesperia, California, USA*
Latitude: 34.4371°, Longitude: -117.3766°
Elevation: 3440.77 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.083** (0.068-0.101)	**0.118** (0.098-0.145)	**0.166** (0.136-0.203)	**0.204** (0.167-0.252)	**0.257** (0.203-0.329)	**0.299** (0.231-0.390)	**0.341** (0.257-0.456)	**0.385** (0.283-0.529)	**0.445** (0.314-0.638)	**0.493** (0.335-0.731)
10-min	**0.118** (0.098-0.145)	**0.170** (0.140-0.207)	**0.237** (0.196-0.291)	**0.293** (0.239-0.362)	**0.369** (0.292-0.471)	**0.428** (0.331-0.558)	**0.488** (0.369-0.653)	**0.552** (0.405-0.759)	**0.638** (0.449-0.915)	**0.706** (0.481-1.05)
15-min	**0.143** (0.119-0.175)	**0.205** (0.170-0.251)	**0.287** (0.236-0.352)	**0.354** (0.289-0.437)	**0.446** (0.353-0.570)	**0.517** (0.400-0.675)	**0.591** (0.446-0.790)	**0.667** (0.490-0.917)	**0.772** (0.544-1.11)	**0.854** (0.581-1.27)
30-min	**0.217** (0.180-0.265)	**0.311** (0.257-0.380)	**0.435** (0.359-0.533)	**0.537** (0.439-0.664)	**0.677** (0.535-0.865)	**0.785** (0.608-1.02)	**0.896** (0.677-1.20)	**1.01** (0.743-1.39)	**1.17** (0.824-1.68)	**1.30** (0.881-1.92)
60-min	**0.302** (0.250-0.369)	**0.433** (0.358-0.530)	**0.606** (0.499-0.743)	**0.747** (0.611-0.924)	**0.942** (0.744-1.20)	**1.09** (0.846-1.43)	**1.25** (0.942-1.67)	**1.41** (1.03-1.94)	**1.63** (1.15-2.34)	**1.80** (1.23-2.68)
2-hr	**0.434** (0.359-0.530)	**0.590** (0.488-0.722)	**0.802** (0.661-0.983)	**0.979** (0.800-1.21)	**1.23** (0.971-1.57)	**1.43** (1.11-1.86)	**1.64** (1.24-2.19)	**1.86** (1.36-2.55)	**2.17** (1.53-3.11)	**2.42** (1.64-3.58)
3-hr	**0.548** (0.453-0.669)	**0.733** (0.605-0.895)	**0.985** (0.812-1.21)	**1.20** (0.981-1.48)	**1.51** (1.19-1.92)	**1.75** (1.36-2.29)	**2.01** (1.52-2.69)	**2.29** (1.68-3.15)	**2.69** (1.89-3.85)	**3.01** (2.05-4.47)
6-hr	**0.766** (0.634-0.935)	**1.01** (0.838-1.24)	**1.36** (1.12-1.67)	**1.66** (1.35-2.05)	**2.09** (1.65-2.66)	**2.44** (1.89-3.18)	**2.81** (2.12-3.76)	**3.22** (2.37-4.43)	**3.81** (2.69-5.46)	**4.30** (2.93-6.38)
12-hr	**0.980** (0.811-1.20)	**1.34** (1.11-1.64)	**1.84** (1.51-2.25)	**2.27** (1.85-2.80)	**2.88** (2.28-3.69)	**3.39** (2.63-4.43)	**3.93** (2.97-5.26)	**4.53** (3.32-6.23)	**5.38** (3.79-7.72)	**6.09** (4.15-9.04)
24-hr	**1.34** (1.19-1.54)	**1.89** (1.68-2.18)	**2.66** (2.35-3.08)	**3.33** (2.91-3.88)	**4.28** (3.63-5.16)	**5.06** (4.20-6.22)	**5.90** (4.78-7.43)	**6.80** (5.36-8.81)	**8.11** (6.13-11.0)	**9.20** (6.72-12.8)
2-day	**1.50** (1.33-1.72)	**2.11** (1.87-2.44)	**2.98** (2.63-3.44)	**3.72** (3.26-4.34)	**4.81** (4.08-5.80)	**5.71** (4.74-7.03)	**6.69** (5.42-8.42)	**7.75** (6.10-10.0)	**9.30** (7.03-12.6)	**10.6** (7.74-14.8)
3-day	**1.60** (1.42-1.84)	**2.25** (1.99-2.60)	**3.17** (2.80-3.66)	**3.96** (3.47-4.62)	**5.13** (4.35-6.18)	**6.10** (5.06-7.50)	**7.15** (5.79-9.01)	**8.31** (6.54-10.8)	**10.00** (7.56-13.5)	**11.4** (8.34-15.9)
4-day	**1.73** (1.53-1.99)	**2.42** (2.15-2.79)	**3.40** (3.00-3.93)	**4.26** (3.73-4.96)	**5.51** (4.67-6.63)	**6.55** (5.43-8.05)	**7.67** (6.22-9.67)	**8.91** (7.02-11.5)	**10.7** (8.11-14.5)	**12.3** (8.96-17.1)
7-day	**1.92** (1.70-2.21)	**2.66** (2.36-3.07)	**3.71** (3.28-4.29)	**4.62** (4.05-5.38)	**5.95** (5.04-7.16)	**7.05** (5.85-8.66)	**8.24** (6.67-10.4)	**9.54** (7.52-12.4)	**11.4** (8.65-15.4)	**13.0** (9.53-18.2)
10-day	**2.05** (1.82-2.36)	**2.84** (2.52-3.27)	**3.94** (3.48-4.55)	**4.89** (4.28-5.70)	**6.27** (5.31-7.55)	**7.41** (6.15-9.11)	**8.64** (7.00-10.9)	**9.99** (7.87-12.9)	**12.0** (9.04-16.1)	**13.6** (9.93-19.0)
20-day	**2.49** (2.21-2.87)	**3.42** (3.03-3.94)	**4.71** (4.16-5.44)	**5.82** (5.10-6.78)	**7.43** (6.30-8.95)	**8.76** (7.27-10.8)	**10.2** (8.25-12.8)	**11.7** (9.25-15.2)	**14.0** (10.6-18.9)	**15.9** (11.6-22.2)
30-day	**2.94** (2.60-3.38)	**4.00** (3.54-4.61)	**5.48** (4.84-6.33)	**6.75** (5.91-7.87)	**8.59** (7.28-10.3)	**10.1** (8.39-12.4)	**11.7** (9.50-14.8)	**13.5** (10.6-17.5)	**16.1** (12.2-21.7)	**18.3** (13.4-25.5)
45-day	**3.48** (3.08-4.00)	**4.68** (4.14-5.39)	**6.34** (5.60-7.33)	**7.78** (6.81-9.06)	**9.85** (8.35-11.9)	**11.5** (9.59-14.2)	**13.4** (10.8-16.9)	**15.4** (12.1-20.0)	**18.3** (13.9-24.8)	**20.8** (15.2-29.1)
60-day	**3.95** (3.50-4.55)	**5.24** (4.64-6.03)	**7.01** (6.19-8.11)	**8.55** (7.48-9.96)	**10.8** (9.12-13.0)	**12.6** (10.4-15.5)	**14.6** (11.8-18.3)	**16.7** (13.2-21.7)	**19.9** (15.1-26.9)	**22.6** (16.5-31.6)

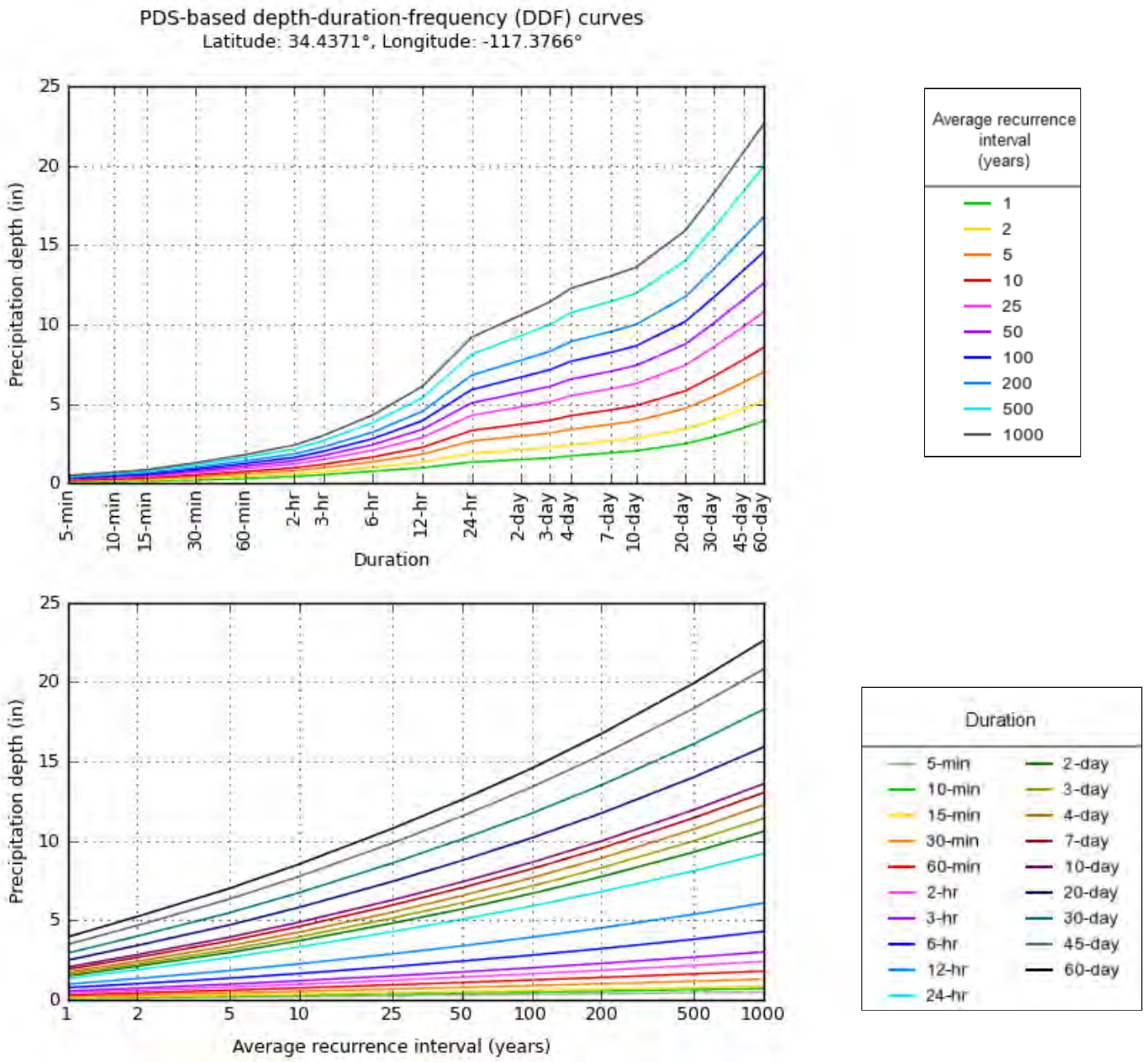
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



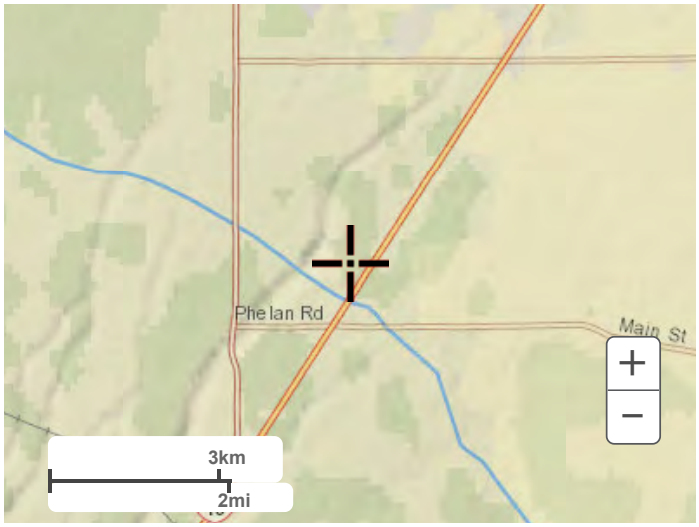
NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Wed Jul 6 18:51:42 2022

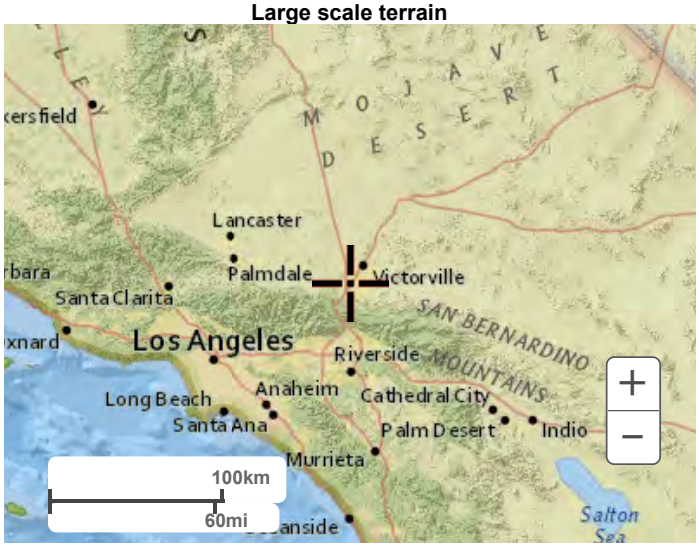
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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



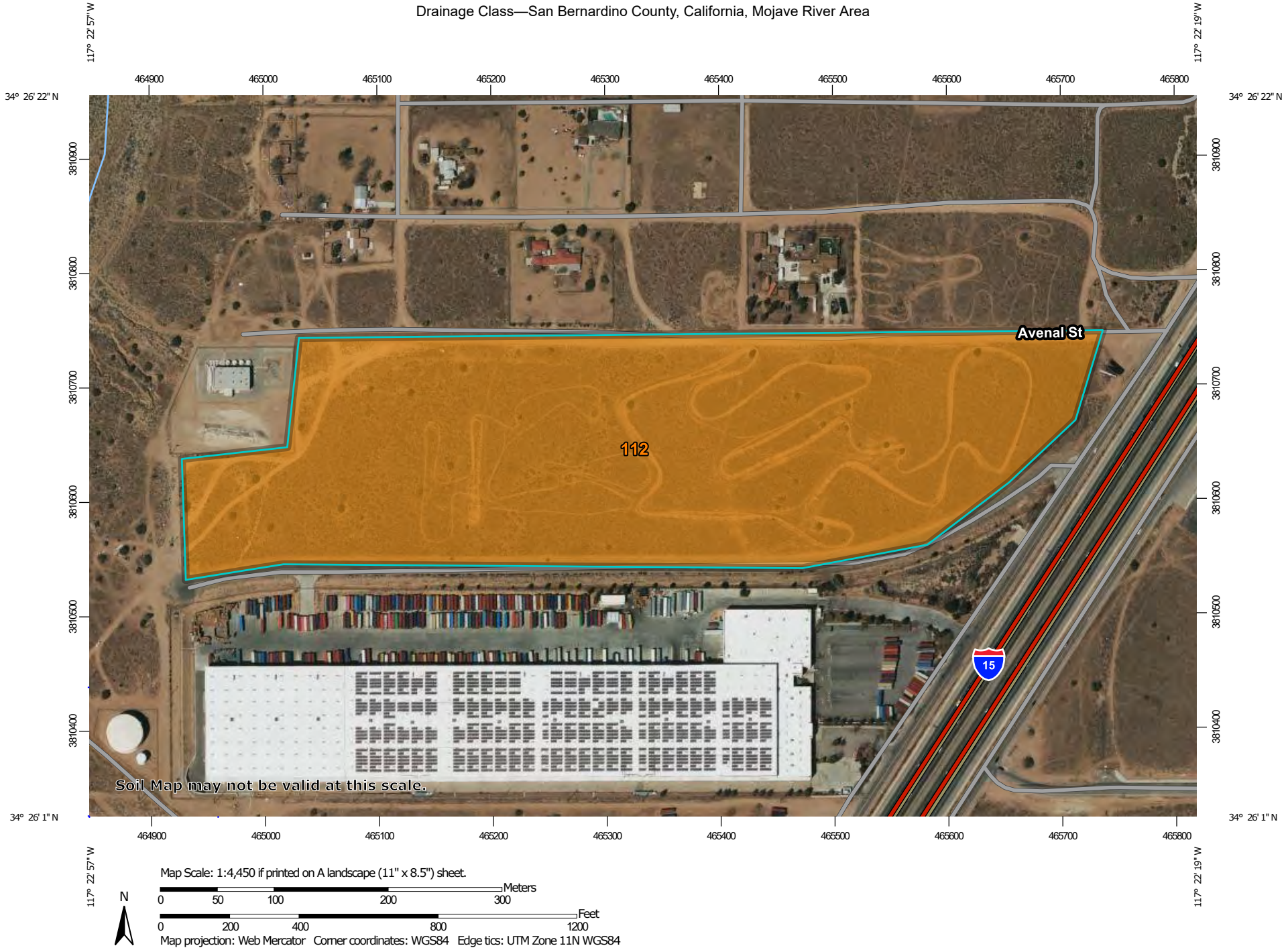
Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer



Map Scale: 1:4,450 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Lines

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Points

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 13, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 27, 2021—May 24, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
112	CAJON SAND, 0 TO 2 PERCENT SLOPES	Somewhat excessively drained	34.8	100.0%
Totals for Area of Interest			**34.8**	**100.0%**

Description

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix I – Conceptual WQMP

MOJAVE RIVER WATERSHED

Conceptual Water Quality Management Plan

For:

HESPERIA SPEC INDUSTRIAL

WHERE APPLICABLE, INSERT GRADING PERMIT NO., BUILDING PERMIT NO., TRACT NUMBER, LAND DEVELOPMENT FILE NO., CUP, SUP AND/OR APN (SPECIFY LOT NUMBERS IF SITE IS A PORTION OF A TRACT)

Prepared for:

Rachamin 5, LLC

6001 E Slauson Ave

Commerce, CA 90040

(213) 769-4222

Prepared by:

4150 Concours, Suite 100

Ontario, CA 91764

(909) 989-9789

Job Number: 2019-164

Submittal Date: 07-13-20212

Revision No. and Date: Insert No and Current Revision Date

Revision No. and Date: Insert No and Current Revision Date

Revision No. and Date: Insert No and Current Revision Date

Final Approval Date:_____

Project Owner's Certification

This Mojave River Watershed Water Quality Management Plan (WQMP) has been prepared for **Rachamin 5, LLC** by **Westland Group, Inc**. The WQMP is intended to comply with the requirements of the **City of Hesperia** and the Phase II Small MS4 General Permit for the Mojave River Watershed. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the Phase II Small MS4 Permit and the intent of San Bernardino County (unincorporated areas of Phelan, Oak Hills, Spring Valley Lake and Victorville) and the incorporated cities of Hesperia and Victorville and the Town of Apple Valley. Once the undersigned transfers its interest in the property, its successors in interest and the city/county/town shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):		Grading Permit Number(s):	
Tract/Parcel Map Number(s):	Parcel Map No.	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			

Owner's Signature			
Owner Name: Brandon Gallup			
Title	Project Manager		
Company	Rachamin 5, LLC		
Address	6001 E Slauson Ave., Commerce, CA 90040		
Email			
Telephone #	(213) 769-4222		
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):		Grading Permit Number(s):	
Tract/Parcel Map Number(s):	Parcel Map No. 18615	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of the California State Water Resources Control Board Order No. 2013-0001-DWQ.

Engineer: Glenn Chung		PE Stamp Below
Title	Executive Vice President/Principal	
Company	Westland Group, Inc.	
Address	4150 Concours, Suite 100, Ontario, CA 91764	
Email	gchung@westlandgroup.net	
Telephone #	(909) 989-9789	
Signature		
Date		

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Section I – Introduction

This WQMP template has been prepared specifically for the Phase II Small MS4 General Permit in the Mojave River Watershed. This location is within the jurisdiction of the Lahontan Regional Water Quality Control Board (LRWQCB). This document should not be confused with the WQMP template for the Santa Ana Phase I area of San Bernardino County.

WQMP preparers must refer to the MS4 Permit for the Mojave Watershed WQMP template and Technical Guidance (TGD) document found at: http://cms.sbcounty.gov/dpw/Land/NPDES.aspx to find pertinent arid region and Mojave River Watershed specific references and requirements.

Section 1 Discretionary Permit(s)

Form 1-1 Project Information					
Project Name	Hesperia Spec Industrial Center				
Project Owner Contact Name:	Mr. Ramin Namvar				
Mailing Address:	6001 E Slauson Ave	E-mail Address:		Telephone:	(213) 769-4222
Permit/Application Number(s):			Tract/Parcel Map Number(s):	Parcel Map No.	
Additional Information/ Comments:					
Description of Project:	The proposed site is an industrial development located near the northwest corner of Palmeto Way and Amargosa Rd in Hesperia, California. There are no erosive site conditions with a relatively flat topography. The project is currently vacant and undeveloped with the topography displays a drainage pattern via surface flow to the northeast. As runoff is draining northeast via surface flow, it will then flow into the roadside drainage swale and flow north along Amargosa Road. The flows would then eventually lead into the Oro Grande Wash. The proposed site will be considered an industrial development. The flows shall be collected through the nearest catch basin which is conveyed to infiltration/retention basins via a storm drain system. The storm drain system was designed to efficiently direct flow into infiltration/detention basins, as well as a single underground infiltration basin. The proposed project will convey flows into the underground infiltration system and when filled, flows will be conveyed into the infiltration/retention basin. The project proposes to construct a building that will be used for industrial and commercial purposes. The site will have dedicated parking areas and truck docking areas. In addition, for water quality the project proposes to have its own storm drain system that will use the combination of underground and above ground infiltration to treat the stormwater runoff. Part of the project will include offsite improvements that include constructing the parkway along the frontage of the project on Avenal Street.				

Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	Not Applicable

Section 2 Project Description

2.1 Project Information

The WQMP shall provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

2.1.1 Project Sizing Categorization

If the Project is greater than 5,000 square feet, and not on the excluded list as found on Section 1.4 of the TGD, the Project is a Regulated Development Project.

If the Project is creating and/or replacing greater than 2,500 square feet but less than 5,000 square feet of impervious surface area, then it is considered a Site Design Only project. This criterion is applicable to all development types including detached single family homes that create and/or replace greater than 2,500 square feet of impervious area and are not part of a larger plan of development.

Form 2.1-1 Description of Proposed Project

1 Regulated Development Project Category (Select all that apply):

☒ #1 New development involving the creation of 5,000 ft^2 or more of impervious surface collectively over entire site	☐ #2 Significant re-development involving the addition or replacement of 5,000 ft^2 or more of impervious surface on an already developed site	☐ #3 Road Project – any road, sidewalk, or bicycle lane project that creates greater than 5,000 square feet of contiguous impervious surface	☐ #4 LUPs – linear underground/overhead projects that has a discrete location with 5,000 sq. ft. or more new constructed impervious surface

☐ Site Design Only (Project Total Square Feet > 2,500 but < 5,000 sq.ft.) *Will require source control Site Design Measures. Use the "PCMP" Template. Do not use this WQMP Template.*

2 Project Area (ft2):	1,376,060	**3** Number of Dwelling Units:		**4** SIC Code:	1541

5 Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:

Maintenance of the WQMP facilities will be the sole responsibility of the property owner:

Rachamin 5, LLC
6001 E Slauson Ave
Commerce, CA 90040
Contact: Mr. Ramin Namvar
Phone: (213) 769-4222

The owner may choose to contract the appropriate employers for the maintenance of stormwater to whom will provide the proper equipment if the current owners to not have the proper equipment and/or knowledge to do so.
Any future property owner(s) whom will succeed Rachamin 5 as the entity responsible for long term maintenance.
No infrastructure will be transferred to a public agency after completion. Refer to Section 5 of this WQMP report for detailed maintenance activities.

2.3 Potential Stormwater Pollutants

Best Management Practices (BMP) measures for pollutant generating activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment (or an equivalent manual). Pollutant generating activities must be considered when determining the overall pollutants of concern for the Project as presented in Form 2.3-1.

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-2 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern

Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	Wild Bird and Pet Waste, Garbage
Nutrients - Phosphorous	E ☒	N ☐	Fertilizers, Food Waste, & Garbage
Nutrients - Nitrogen	E ☒	N ☐	Fertilizer & Waste
Noxious Aquatic Plants	E ☐	N ☒	The proposed development does not include any areas where water will be standing long enough to allow the growth of aquatic plants.
Sediment	E ☒	N ☐	Driveways, Rooftops, Sidewalks, Paved areas & landscape
Metals	E ☒	N ☐	Cars, Trucks & Parking Areas
Oil and Grease	E ☒	N ☐	Leaking Vehicles & Parking Areas
Trash/Debris	E ☒	N ☐	Poorly managed Trash Container & Parking area
Pesticides / Herbicides	E ☒	N ☐	Landscape Area
Organic Compounds	E ☒	N ☐	Cars & Trucks
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

Section 3 Site and Watershed Description

Describe the project site conditions that will facilitate the selection of BMPs through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed Drainage Management Areas (DMAs)) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. ***If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet. A map presenting the DMAs must be included as an appendix to the WQMP document.***

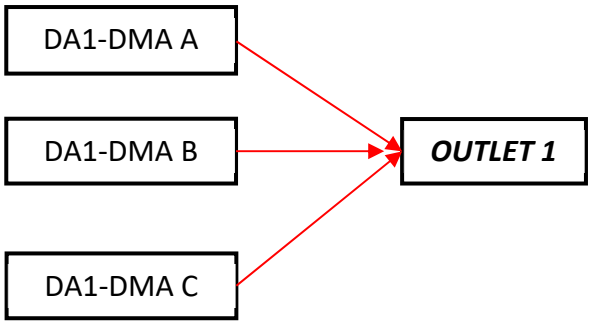
Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34°26'11.5"N	Longitude 117°22'36.6"W	Thomas Bros Map page

1 San Bernardino County climatic region: ☒ Desert

2 Does the site have more than one drainage area (DA): Yes☐ No☒ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*

c



Conveyance	Briefly describe on-site drainage features to convey runoff that is not retained within a DMA
	Ex. Bioretention overflow to vegetated bioswale with 4' bottom width, 5:1 side slopes and bed slope of 0.01. Conveys runoff for 1000' through DMA 1 to existing catch basin on SE corner of property
	*Runoff sheet flows into the nearest catch basin which is then routed into a combination of an "**Underground CMP Infiltration System**" and "**Retention Basin-1**".*
	*Runoff sheet flows into the nearest catch basin which is then routed into a combination of an "**Retention Basin-2**" and the remaining flow is then directed into "**Retention Basin-4**".*
	*Runoff sheet flows into the nearest catch basin which is then routed into a combination of an "**Retention Basin-3**" and the remaining flow is then directed into "**Retention Basin-4**".*

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1				
For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA A			
1 DMA drainage area (ft^2)	1,376,060			
2 Existing site impervious area (ft^2)	0			
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	AMC II			
4 Hydrologic soil group *Refer to County Hydrology Manual Addendum for Arid Regions – http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_addendum.pdf*	B			
5 Longest flowpath length (ft)	2,695			
6 Longest flowpath slope (ft/ft)	0.014			
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Chaparral			
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50%* ***Attach photos of site to support rating***	Poor			

Form 3-3 Watershed Description for Drainage Area

Receiving waters Refer to SWRCB site: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml	Mojave River (Mojave Forks Reservoir outlet to Upper Narrows) Oro Grande Owner: SBCFCD
Applicable TMDLs *http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml*	Boron, Chloride, Dissolved oxygen saturation, Nitrate, Nitrite, Dissolved Oxygen, Total Kjeldahl Nitrogen, Total Dissolved Solids, Water Temperature, Sulfates, Specific Conductance, Phosphorus, Phosphate, pH,
303(d) listed impairments *http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml*	Fluoride
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	Not Applicable
Hydromodification Assessment	☐ Yes *Complete Hydromodification Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-9 in submittal* ☒ No

Section 4 Best Management Practices (BMP)

4.1 Source Control BMPs and Site Design BMP Measures

The information and data in this section are required for both Regulated Development and Site Design Only Projects. Source Control BMPs and Site Design BMP Measures are the basis of site-specific pollution management.

4.1.1 Source Control BMPs

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

The identified list of source control BMPs correspond to the CASQA Stormwater BMP Handbook for New Development and Redevelopment.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	The current owner/developer and future owners and their POA shall be familiar with the contents of this WQMP and County & City ordinances and brochures and furnish copies of these documents to all future property owners.
N2	Activity Restrictions	☒	☐	Property owners and their tenants or occupants shall not be allowed to discharge chemicals, chemical residues, wastewater or other prohibited discharges listed in the City stormwater Ordinance, to the outside, paved areas of the site; or store chemicals or other pollutant sources in a non-spill contained or covered facilities as stipulated in the CC&Rs.
N3	Landscape Management BMPs	☒	☐	The POA and their landscape maintenance contractor shall inspect the irrigation system plant health and erosion problems after each landscape procedure and shall report all repairs and problems to the POA. All routine landscaping maintenance.
N4	BMP Maintenance	☒	☐	The POA shall inspect for standing water in the water retention/infiltration basins, 48 hours after storm events. BMP maintenance shall be performed per the schedule in Form 5-1, as needed to restore free drainage.
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	The POA will file appropriate hazardous material disclosures, if any storage is conducted, and must comply with all Title 22 CCR, Chapter 29 regulations.
N6	Local Water Quality Ordinances	☐	☒	The POA shall ensure that all maintenance activities at the site comply with the City of Ontario's Stormwater Ordinance, through the implementation of BMPs.
N7	Spill Contingency Plan	☒	☐	Building operators shall prepare specific plans based on materials on site for the cleanup of spills. Plans shall mandate stock piling of cleanup materials, notification of agencies, disposal, documentation, ect.
N8	Underground Storage Tank Compliance	☐	☒	There are no underground storage tanks at this site.
N9	Hazardous Materials Disclosure Compliance	☐	☒	The current owner and the future POA shall prohibit the storage of hazardous materials.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	The current owners or the future POA shall require all fire code requirements to be implemented at this project site.
N11	Litter/Debris Control Program	☒	☐	The property owners, POA and their contractor shall pick up litter and sweep and clean the existing trash enclosure weekly. The trash enclosure is designed to divert all flows around the dumpsters and shall be roofed. The HOA shall contract with a refuse company to have the dumpsters emptied on a weekly basis, at a minimum.
N12	Employee Training	☒	☐	The POA shall require all maintenance contractors to train their employees in stormwater BMP implementation.
N13	Housekeeping of Loading Docks	☒	☐	Dock areas shall be swept regularly with litter control and cleanup procedures eliminating the use of water.
N14	Catch Basin Inspection Program	☒	☐	The on-site catch basins shall be inspected monthly during the rainy season (October-May) and before and after each storm to ensure proper operation. The HOA shall contract with a qualified landscape contractor to inspect and clean out accumulation of trash, litter and sediment and check for evidence of illegal dumping of waste materials into on-site drains.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	The paved areas and common open areas of the project site shall be swept and cleaned weekly by the POA's contractor
N16	Other Non-structural Measures for Public Agency Projects	☐	☒	This development is not part of a Public Agency Project.
N17	Comply with all other applicable NPDES permits	☒	☐	The developer of this site shall comply with all BMP implementation requirements of the City of Ontario for Stormwater discharges during construction of this project and shall file for a permit coverage under the Statewide General Construction Stormwater Permit, prior to beginning construction/grading activities at this site. Following occupancy, owners, tenants, and POA shall comply with SB County MS4 Permit requirements, enforced by the City of Ontario.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	A painted message "No Dumping-Drains to River" shall be placed on each catch basin by developer. The message shall be inspected annually & repainted as necessary by the POA.
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	This development does not include the storage of materials outdoors.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Stormwater flows are diverted away from the trash enclosure. All dumpsters shall have working lids which shall be kept closed, at all times. Trash enclosure shall comply with CASQA SD-32 and shall have doors and a solid roof.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	The irrigation system will include devices to prevent low head drainage, overspray and run off through the use of pressure regulating devices, check valves, rain shutoff valves, flow sensors, pressure drop sensors, proper spacing, low precipitation emission devices and ET or weather-based controllers. Landscape and irrigation shall be consistent with the State Model Water Efficient landscape Ordinance and the City of Ontario landscape Development Standards. Plants installed will be arranged according to similar hydrozones and meet the required water budget for the site. Shade trees shall be used to intercept rainwater and reduce heat gain on paving.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	All landscaped areas shall comply with depressed grading requirements by finish grading to a minimum of 1" below pavement grades or top-of-curb.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☐	☐	All slopes shall be hard lined, rip-rapped or vegetated to provide erosion protection and prevent sediment transport
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	Unloading of truck trailers at docks will occur under cover of the building. It is not feasible to cover the entire loading area as it would be cost prohibitive. Project will incorporate dock high rollup doors and sweeping activities at the outside of the building.
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	Maintenance bays are not proposed as a part of this development, and no maintenance activities will be allowed on site.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Vehicle wash areas are not provided as part of this development.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	Outdoor processing is not associated with the proposed development.
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Outdoor equipment is not associated with the proposed development.
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	Fueling areas are not included as part of this development.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☒	☐	No hillsides will require re-vegetation as part of the proposed development.
S14	Wash water control for food preparation areas	☐	☒	The proposed development does not include food preparation areas.
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	The proposed development does not include community car wash areas

4.1.2 Site Design BMPs

As part of the planning phase of a project, the site design practices associated with new LID requirements in the Phase II Small MS4 Permit must be considered. Site design BMP measures can result in smaller Design Capture Volume (DCV) to be managed by both LID and hydromodification control BMPs by reducing runoff generation.

As is stated in the Permit, it is necessary to evaluate site conditions such as soil type(s), existing vegetation and flow paths will influence the overall site design.

Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Site Design Practices Checklist

Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☒ No ☐ Explanation: Impervious areas will be minimized to the maximum extent practicable. The proposed development requires large areas for loading docks and building foot prints.
Maximize natural infiltration capacity; Including improvement and maintenance of soil: Yes ☒ No ☐ Explanation: All pervious areas will be below adjacent impervious areas to maximize natural infiltration, and the project site utilizes subsurface infiltration basins.
Preserve existing drainage patterns and time of concentration: Yes ☐ No ☒ Explanation: Post-development has different travel distance, surface roughness and time concentration from the existing condition.
Disconnect impervious areas. Including rerouting of rooftop drainage pipes to drain stormwater to storage or infiltration BMPs instead of to storm drain : Yes ☒ No ☐ Explanation: Most areas are run through landscape areas prior to entering the storm drain system. Roof area will be conveyed through adjacent landscaping, where feasible.
Use of Porous Pavement.: Yes ☐ No ☒ Explanation: Any areas that are disturbed will be stabilized prior to project completion.
Protect existing vegetation and sensitive areas: Yes ☐ No ☒ Explanation: Native vegetation has been mostly removed by agricultural activities, and the existing undeveloped area will not be preserved.
Re-vegetate disturbed areas. Including planting and preservation of drought tolerant vegetation. : Yes ☒ No ☐ Explanation: Any areas that are disturbed will be stabilized prior to project completion.

Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐ Explanation: Landscaping areas will be staked off after rough grading has been completed to prevent excessive compaction, the areas in which the subsurface basins are to be constructed will minimize compaction.
Utilize naturalized/rock-lined drainage swales in place of underground piping or imperviously lined swales: Yes ☐ No ☒ Explanation: The project does not incorporate naturalized/ rock-lined drainage swales in place of underground piping.
Stake off areas that will be used for landscaping to minimize compaction during construction : Yes ☒ No ☐ Explanation: Landscaping areas will be staked off after rough grading has been completed to prevent excessive compaction.
Use of Rain Barrels and Cisterns, Including the use of on-site water collection systems.: Yes ☐ No ☒ Explanation: The project does not incorporate rain barrels and cisterns.
Stream Setbacks. Includes a specified distance from an adjacent steam: Yes ☐ No ☒ Explanation: There are no adjacent to the property.

It is noted that, in the Phase II Small MS4 Permit, site design elements for green roofs and vegetative swales are required. Due to the local climatology in the Mojave River Watershed, proactive measures are taken to maximize the amount of drought tolerant vegetation. It is not practical in this region to have green roofs or vegetative swales. As part of site design the project proponent should utilize locally recommended vegetation types for landscaping. Typical landscaping recommendations are found in following local references:

San Bernardino County Special Districts:

Guide to High Desert Landscaping -
http://www.specialdistricts.org/Modules/ShowDocument.aspx?documentid=795

Recommended High-Desert Plants -
http://www.specialdistricts.org/modules/showdocument.aspx?documentid=553

Mojave Water Agency:

Desert Ranch: http://www.mojavewater.org/files/desertranchgardenprototype.pdf

Summertree: http://www.mojavewater.org/files/Summertree-Native-Plant-Brochure.pdf

Thornless Garden: http://www.mojavewater.org/files/thornlessgardenprototype.pdf

Mediterranean Garden: http://www.mojavewater.org/files/mediterraneangardenprototype.pdf

Lush and Efficient Garden: http://www.mojavewater.org/files/lushandefficientgardenprototype.pdf

Alliance for Water Awareness and Conservation (AWAC) outdoor tips – http://hdawac.org/save-outdoors.html

4.2 Treatment BMPs

After implementation and design of both Source Control BMPs and Site Design BMP measures, any remaining runoff from impervious DMAs must be directed to one or more on-site, treatment BMPs (LID or biotreatment) designed to infiltrate, evaportranspire, and/or bioretain the amount of runoff specified in Permit Section E.12.e (ii)(c) Numeric Sizing Criteria for Storm Water Retention and Treatment.

4.2.1 Project Specific Hydrology Characterization

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in Section E.12.e.ii.c and Section E.12.f of the Phase II Small MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection from hydromodification.

If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.

It is noted that in the Phase II Small MS4 Permit jurisdictions, the LID BMP Design Capture Volume criteria is based on the 2-year rain event. The hydromodification performance criterion is based on the 10-year rain event.

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), San Bernardino County requires use of the P_6 method (Form 4.2-1) For pre- and post-development hydrologic calculation, San Bernardino County requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for hydromodification performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA1 DMA A)		
1 Project area DA1 DMA A (ft^2): 273,992	**2** Imperviousness after applying preventative site design practices (Imp%): 81	**3** Runoff Coefficient (Rc): 0.61 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.43 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.54 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 14,742 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA1 DMA B)		
1 Project area DA1 DMA B (ft^2): 831,125	**2** Imperviousness after applying preventative site design practices (Imp%): 90	**3** Runoff Coefficient (Rc): 0.73 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.43 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.54 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 52,842 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA1 DMA C)		
1 Project area DA1 DMA C (ft^2): 270,943	**2** Imperviousness after applying preventative site design practices (Imp%): 48	**3** Runoff Coefficient (Rc): 0.33 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.43 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.54 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 7,720 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

4.3 BMP Selection and Sizing

Complete the following forms for each project site DA to document that the proposed treatment (LID/Bioretention) BMPs conform to the project DCV developed to meet performance criteria specified in the Phase II Small MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the Phase II Small MS4 Permit (see Section 5.3 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design Measures (Form 4.3-2)
- Retention and Infiltration BMPs (Form 4.3-3) or
- Biotreatment BMPs (Form 4.3-4).

> Please note that the selected BMPs may also be used as dual purpose for on-site, hydromodification mitigation and management.

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Form 4.3-2 to determine the feasibility of applicable Site Design BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable Site Design BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of site design, retention and/or infiltration BMPs is unable to mitigate the entire DCV, then the remainder of the volume-based performance criteria that cannot be achieved with site design, retention and/or infiltration BMPs must be managed through biotreatment BMPs. If biotreatment BMPs are used, then they must be sized to provide equivalent effectiveness based on Template Section 4.3.4.

4.3.1 Exceptions to Requirements for Bioretention Facilities

Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box-type biofilters or in-vault media filters) may be used for the following categories of Regulated Projects:

1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;

2) Facilities receiving runoff solely from existing (pre-project) impervious areas; and

3) Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

[1] Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒
Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

[2] Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒
(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than ten feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

[3] Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[4] Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[5] Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[6] Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒
See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

[7] Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒
If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Selection and Evaluation of Biotreatment BMP.
If no, then proceed to Item 8 below.

[8] Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒
If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Site Design BMP.
If no, then proceed to Item 9, below.

[9] All answers to Item 1 through Item 6 are "No":
Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Site Design BMPs.

4.3.2 Site Design BMP

Section E.12.e. of the Small Phase II MS4 Permit emphasizes the use of LID preventative measures; and the use of Site Design Measures reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable Site Design Measures shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of Site Design BMPs. If a project cannot feasibly meet BMP sizing requirements or cannot fully address hydromodification, feasibility of all applicable Site Design BMPs must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Refer to Section 5.4 in the TGD for more detailed guidance.

Form 4.3-2 Site Design BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3):	*$V_{retention}$ =Sum of Item 4 for all BMPs*		
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)			
8 Ponding depth (ft) (min. 0.5 ft.)			
9 Surface area of amended soil/gravel (ft^2)			
10 Average depth of amended soil/gravel (ft) (min. 1 ft.)			
11 Average porosity of amended soil/gravel			
12 Retention volume achieved from on-lot infiltration (ft^3) *$V_{retention}$ = (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*			
13 Runoff volume retention from on-lot infiltration (ft^3):	*$V_{retention}$ =Sum of Item 12 for all BMPs*		

Form 4.3-2 cont. Site Design BMPs (DA 1)

14 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 14-18. If no, proceed to Item 19*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Number of Street Trees			
16 Average canopy cover over impervious area (ft^2)			
17 Runoff volume retention from street trees (ft^3) *$V_{retention}$ = Item 15 * Item 16 * (0.05/12) assume runoff retention of 0.05 inches*			
18 Runoff volume retention from street tree BMPs (ft^3):	*$V_{retention}$ = Sum of Item 17 for all BMPs*		
19 Total Retention Volume from Site Design BMPs:	*Sum of Items 5, 13 and 18*		

4.3.3 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix C of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

4.3.3.1 Allowed Variations for Special Site Conditions

The bioretention system design parameters of this Section may be adjusted for the following special site conditions:

1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.

2) Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).

3) Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.

4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide adequate pretreatment to address pollutants of concern unless these high-risk areas are isolated from storm water runoff or bioretention areas with no chance of spill migration.

.

Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 1)

1 Remaining LID DCV not met by site design BMP (ft^3): 75,304 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item19*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 1 BMP Type Infiltration/Retention Basin		
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix C of the TGD for WQMP for minimum requirements for assessment methods*	TBD		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	2		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	5		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*			
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	1.5		
8 Infiltrating surface area, SA_{BMP} (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	50,203		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	4		
10 Amended soil porosity	0.35		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	0		
12 Gravel porosity	0		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3		
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	295,000(Basin 1)		
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*	305,000		

16 Total Retention Volume from LID Infiltration BMPs: 600,000 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 797% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained onsite with combination of hydrologic source control and LID retention/infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-4 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV. Biotreatment computations are included as follows:

- Use Form 4.3-5 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-6 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-7 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-4 Selection and Evaluation of Biotreatment BMP (DA 1)

1 Remaining LID DCV not met by site design , or infiltration, BMP for potential biotreatment (ft^3): 0 *Form 4.2-1 Item 7 - Form 4.3-2 Item 19 – Form 4.3-3 Item 16*	List pollutants of concern *Copy from Form 2.3-1.* Pathogen, Phosphorous, Nitrogen, Sediment, Metals, Oil Grease, Trash/Debris, Pesticides/ Herbicides, Organic Compounds	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-5 and 4.3-6 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-7 to compute treated flow*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet extended detention ☐ Dry extended detention	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): *Form 4.3-5 Item 15 + Form 4.3-6 Item 13*	**4** Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	**5** Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): 0 *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

4.3.5 Conformance Summary

Complete Form 4.3-8 to demonstrate how on-site LID DCV is met with proposed site design, infiltration, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-8 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 75,304 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design BMP (ft^3): 0 *Copy Item18 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 600,000 *Copy Item 16 in Form 4.3-3*

4 On-site biotreatment with volume based biotreatment BMP (ft^3): 0 *Copy Item 3 in Form 4.3-4*

5 Flow capacity provided by flow based biotreatment BMP (cfs): 0 *Copy Item 6 in Form 4.3-4*

6 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design or infiltration BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☒
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible; therefore biotreatment BMP provides biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☒
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

7 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of Site Design, retention and infiltration, , and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes if Form 4.3-4 Item 7is checked yes, Form 4.3-4 Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*

- Facilities, or a combination of facilities, of a different design than in Section E.12.e.(ii)(f) may be permitted if all of the following Phase II Small MS4 General Permit 2013-0001-DWQ 55 February 5, 2013 measures of equivalent effectiveness are demonstrated:
  1) Equal or greater amount of runoff infiltrated or evapotranspired; ☐
  2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment; ☐
  3) Equal or greater protection against shock loadings and spills; ☐
  4) Equal or greater accessibility and ease of inspection and maintenance. ☐

4.3.6 Hydromodification Control BMP

Use Form 4.3-9 to compute the remaining runoff volume retention, after Site Design BMPs are implemented, needed to address hydromodification, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential hydromodification. Describe the proposed hydromodification treatment control BMP. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance.

Alternative Designs — Facilities, or a combination of facilities, of a different design than in Permit Section E.12.e.(ii)(f) may be permitted if all of the following measures of equivalent effectiveness are demonstrated:

1) Equal or greater amount of runoff infiltrated or evapotranspired;

2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;

3) Equal or greater protection against shock loadings and spills;

4) Equal or greater accessibility and ease of inspection and maintenance.

The Project Proponent will need to obtain written approval for an alternative design from the Lahontan Regional Water Board Executive Officer (see Section 6 of the TGD for WQMP).

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMPs included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and a Maintenance Agreement. The Maintenance Agreement must also be attached to the WQMP.

Note that at time of Project construction completion, the Maintenance Agreement must be completed, signed, notarized and submitted to the County Stormwater Department

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Underground Infiltration System	Property Owner	Regular inspections of system to observe sediment build up and infiltration capacity. Cleaning of accumulated trash, debris, and sediment as determined by inspections. Cleaning is recommended during dry weather. See manufacturer recommendations for additional maintenance activities.	Monthly and within 48 hours following a significant storm event to verify there is no standing water in the chambers.
Onsite storm drain catch basins and piping	Property Owner	Onsite catch basins shall be inspected quarterly for debris buildup and evidence of illegal dumping and shall be cleaned whenever debris/sediment accumulates. Removal can be accomplished by vac-truck or other equally effective method.	Quarterly
Hydrodynamic Separator	Property Owner	Visual inspection and debris removed quarterly per manufactures recommendations	Quarterly
Above ground infiltration/ detention Basins	Property Owner	Inspections and maintenance by owners contracted maintenance staff to ensure that water infiltrates into the subsurface completely in 48 hours or less. Visual inspection, landscape maintenance, debris removal and erosion damage repair.	Monthly and within 48 hours following a significant storm event to verify there is no standing water in the chambers.
Landscape Maintenance	Property Owner	Maintain landscape area vegetation, slope protection and grades, adjacent to hardscape and prevent discharges of landscape maintenance waste into storm drains.	Weekly
Litter Control	Property Owner	Maintain roofed waste collection areas and vacuum-sweep drive aisles and parking areas to remove potential stormwater contamination before anticipated storm events.	Weekly/Monthly

Anti-Dumping Stenciling & Signage	Property Owner	Visual inspection and replacement of damaged or illegible stenciling and signage over on-site catch basins	Annually
Irrigation System	Property Owner	Check and repair the irrigation system. Verify there are no leaks or runoff from landscaped areas. Adjust irrigation heads and system run times as necessary to percent overwater of vegetation, overspray or run-off from landscape areas and to ensure the health and aesthetic quality of the landscape.	Weekly
Loading Docks	Property Owner	Sweep and clear debris from dock areas to remove potential stormwater contaminates prior to anticipated storms.	Weekly
Catch Basin Filter Inserts	Property Owner	Visual inspect filter for debris buildup. Removal can be accomplished by vac-truck or other equally effective method. See manufacturer recommendations for additional maintenance activities.	Quarterly and within 48 hours following a significant storm event to verify there is no standing water in the chambers

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

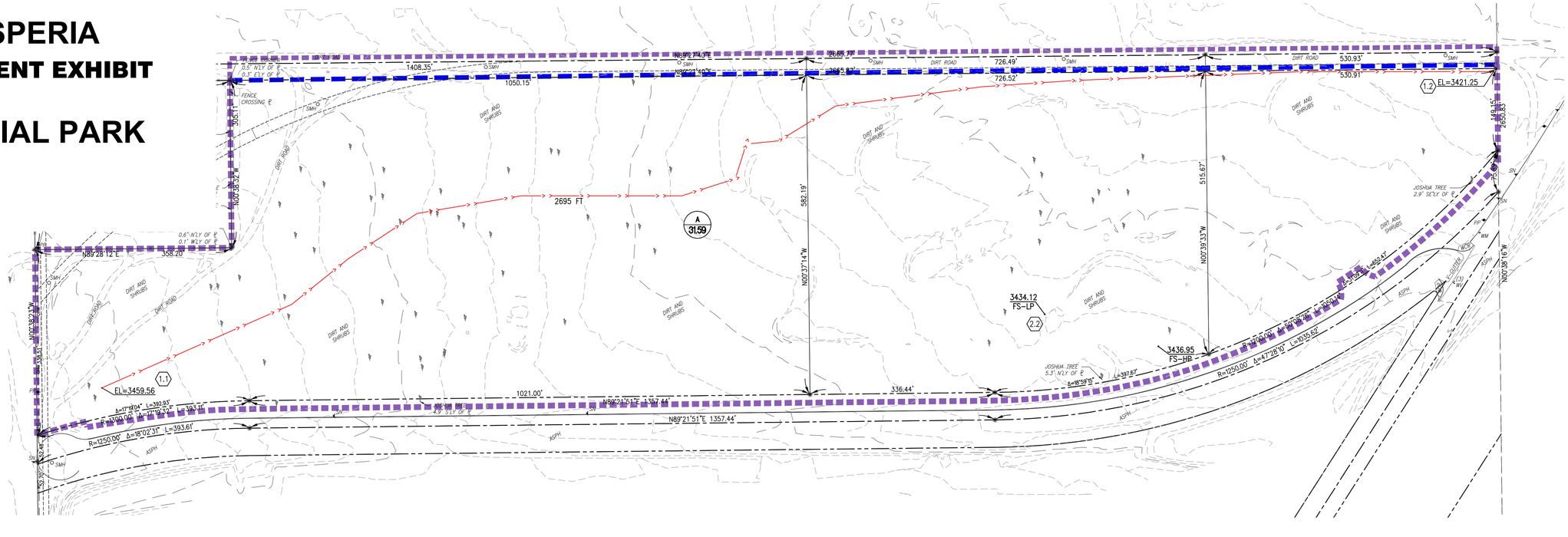
6.3 Post Construction

Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

6.4 Other Supporting Documentation

- BMP Educational Materials
- Activity Restriction – C,C&R's & Lease Agreements

CITY OF HESPERIA
PRE DEVELOPMENT EXHIBIT
FOR
SPEC INDUSTRIAL PARK



HYDROLOGY INFORMATION

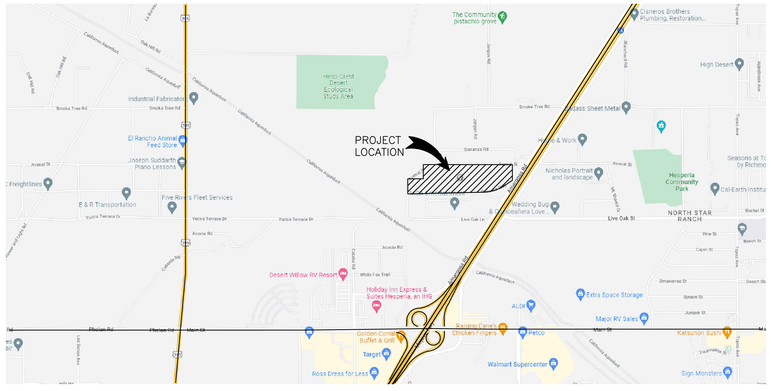
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IMPERVIOUS:	80%	(PER CALCULATIONS)
ISOHYETALS:	0.433" 1.25"	(2-YEAR 1 HOUR) (100-YEAR 1 HOUR)
CN NUMBER:	78	(SOIL GROUP B)
FREQUENCY:	100 YEAR 2/10 YEAR	(FOR STORM DRAIN DESIGN) (FOR WATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

LEGEND:

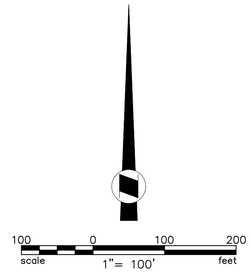
- DRAINAGE AREA/SITE BOUNDARY
- DRAINAGE SUB-AREA BOUNDARY
- STORM WATER FLOW PATH
- PROPOSED STORM DRAIN PIPE
- PROPOSED FLOW DIRECTION ARROW
- DRAINAGE AREA DESIGNATION (X = AREA(AC), XXX)
- NODE (US/DS) (X.X)
- STREAM # (3)
- PROPOSED UNDERGROUND INFILTRATION/DETENTION
- PROPOSED BUILDING
- PROPOSED LANDSCAPING

DRAINAGE NOTES:

1. PROPOSED STORM DRAIN INLET
2. PROPOSED STORM DRAIN
3. PROPOSED INFILTRATION/DETENTION BASIN
4. PROPOSED UNDERGROUND INFILTRATION CMP



VICINITY MAP
N.T.S



PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2019-185

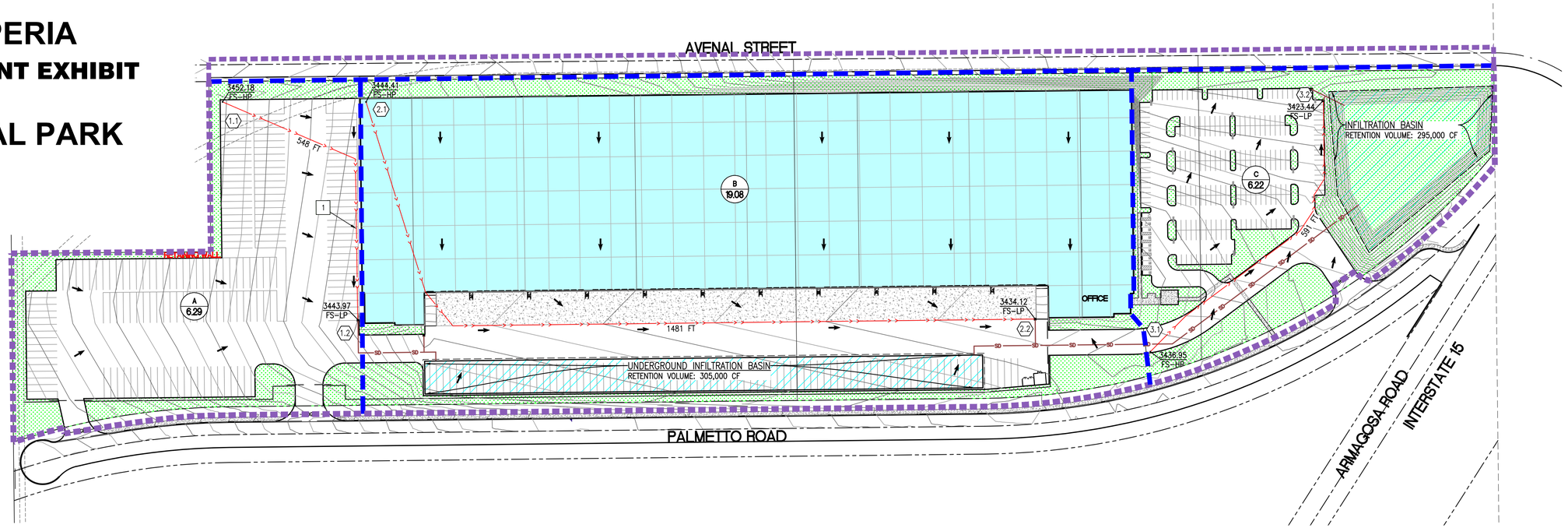
HCCII INDUSTRIAL PARK
WQMP PRE EXHIBIT

CITY OF HESPERIA

DATE: DEC 2021
SHEET 1 OF 1

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CITY OF HESPERIA
POST DEVELOPMENT EXHIBIT
FOR
SPEC INDUSTRIAL PARK



HYDROLOGY INFORMATION

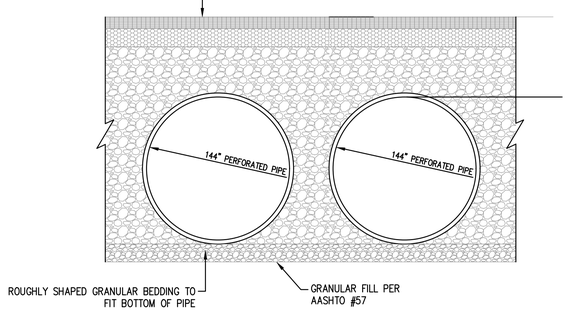
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LEGEND:

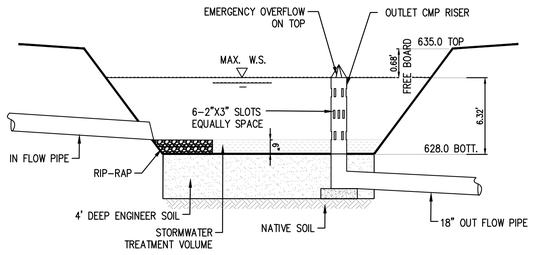
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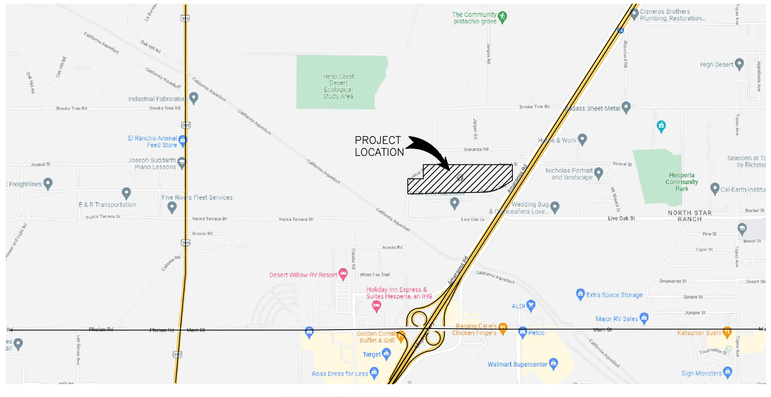
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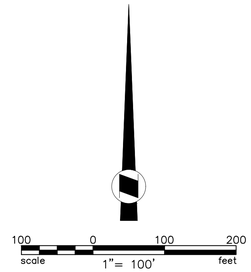
TYPICAL CMP UNDERGROUND INFILTRATION DETAIL
N.T.S



INFILTRATION/DETENTION BASIN-3 DETAIL
N.T.S



VICINITY MAP
N.T.S



PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2019-185

HCCII INDUSTRIAL PARK
HYDROLOGY EXHIBIT

CITY OF HESPERIA

DATE: DEC 2021
SHEET 1 OF 1

Drawing Name: P:\Year_2021\2021-196 Hesperia Industrial - RDA - Chris Sovage\06 Engineering\Reports\Hydrology\3_Exhibits\2021-196_Hydro_Exhibit_Post.dwg
Last Opened: Jul 06, 2022 - 9:28pm by: lucas.glauser

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
25-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 25.0
Computed rainfall intensity:
Storm year = 25.00 1 hour rainfall = 0.942 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.139(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      3.479(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.864
      Subarea runoff =     18.908(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.139(In/Hr)
```

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++++
      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ____________________________________________________________________
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    18.908(CFS)
      Nearest computed pipe diameter  =     24.00(In.)
      Calculated individual pipe flow  =    18.908(CFS)
      Normal flow depth in pipe =   19.31(In.)
      Flow top width inside pipe =   19.03(In.)
      Critical Depth =   18.77(In.)
      Pipe flow velocity =      6.97(Ft/s)
      Travel time through pipe =    3.31 min.
      Time of concentration (TC) =    12.59 min.
```

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.073(In/Hr)
      Time of concentration =    12.59 min.
      Rainfall intensity =      2.810(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.871
      Subarea runoff =     43.201(CFS) for   19.080(Ac.)
      Total runoff =     62.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.090(In/Hr)
```

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++++
      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    62.109(CFS)
      Nearest computed pipe diameter  =     33.00(In.)
      Calculated individual pipe flow  =    62.109(CFS)
      Normal flow depth in pipe =   25.27(In.)
      Flow top width inside pipe =   27.96(In.)
      Critical Depth =   30.18(In.)
      Pipe flow velocity =     12.74(Ft/s)
      Travel time through pipe =    0.88 min.
      Time of concentration (TC) =    13.47 min.
```

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.382(In/Hr)
      Time of concentration =    13.47 min.
      Rainfall intensity =      2.680(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.851
      Subarea runoff =      9.891(CFS) for    6.220(Ac.)
      Total runoff =     72.000(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.147(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
100-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.250 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.084(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      4.617(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
      Subarea runoff =     25.664(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.084(In/Hr)
```

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    25.664(CFS)
      Nearest computed pipe diameter  =     27.00(In.)
      Calculated individual pipe flow  =    25.664(CFS)
      Normal flow depth in pipe =   21.56(In.)
      Flow top width inside pipe =   21.66(In.)
      Critical Depth =   21.24(In.)
      Pipe flow velocity =      7.54(Ft/s)
      Travel time through pipe =    3.06 min.
      Time of concentration (TC) =    12.34 min.
```

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.044(In/Hr)
      Time of concentration =    12.34 min.
      Rainfall intensity =      3.781(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.887
      Subarea runoff =     59.445(CFS) for   19.080(Ac.)
      Total runoff =     85.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.054(In/Hr)
```

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    85.109(CFS)
      Nearest computed pipe diameter  =     39.00(In.)
      Calculated individual pipe flow  =    85.109(CFS)
      Normal flow depth in pipe =   26.86(In.)
      Flow top width inside pipe =   36.12(In.)
      Critical Depth =   34.49(In.)
      Pipe flow velocity =     13.98(Ft/s)
      Travel time through pipe =    0.80 min.
      Time of concentration (TC) =    13.15 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.229(In/Hr)
      Time of concentration =    13.15 min.
      Rainfall intensity =      3.618(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.878
      Subarea runoff =     15.238(CFS) for    6.220(Ac.)
      Total runoff =    100.347(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.088(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 07/15/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6277

2021-196 Hesperia Spec Industrial
Unit Hydrograph
100-year

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
0.01	1	0.75
Rainfall data for year 2		
0.01	6	1.01
Rainfall data for year 2		
0.01	24	1.89

```
--
      Rainfall data for year 100
                0.01            1           1.25
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01            6           2.81
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01           24           5.90
      ------------------------------------------------------------------
--
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++

      ******** Area-averaged max loss rate, Fm ********


      SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap
Fm
      No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)
(In/Hr)
       56.0      75.8         31.59      1.000     0.440    0.200
0.088

      Area-averaged adjusted loss rate Fm (In/Hr) =  0.088

      ********* Area-Averaged low loss rate fraction, Yb **********

      Area       Area          SCS CN    SCS CN      S     Pervious
       (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
           6.32   0.200         56.0      75.8       3.19     0.555
          25.27   0.800         98.0      98.0       0.20     0.960

      Area-averaged catchment yield fraction, Y =  0.879
      Area-averaged low loss fraction, Yb =  0.121
      User entry of time of concentration  =   0.227 (hours)
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
      Watershed area =      31.59(Ac.)
      Catchment Lag time =   0.182 hours
      Unit interval =   5.000 minutes
      Unit interval percentage of lag time = 45.8884
      Hydrograph baseflow =     0.00(CFS)
      Average maximum watershed loss rate(Fm) =  0.088(In/Hr)
      Average low loss rate fraction (Yb) = 0.121 (decimal)
      MOUNTAIN S-Graph Selected
      Computed peak 5-minute rainfall =  0.593(In)
      Computed peak 30-minute rainfall =  1.015(In)
      Specified peak 1-hour rainfall =  1.250(In)
      Computed peak 3-hour rainfall =  2.054(In)
      Specified peak 6-hour rainfall =  2.810(In)
      Specified peak 24-hour rainfall =  5.900(In)
```

```
      Rainfall depth area reduction factors:
      Using a total area of      31.59(Ac.) (Ref: fig. E-4)

      5-minute factor = 0.999     Adjusted rainfall =  0.592(In)
      30-minute factor = 0.999    Adjusted rainfall =  1.014(In)
      1-hour factor = 0.999       Adjusted rainfall =  1.248(In)
      3-hour factor = 1.000       Adjusted rainfall =  2.054(In)
      6-hour factor = 1.000       Adjusted rainfall =  2.810(In)
      24-hour factor = 1.000      Adjusted rainfall =  5.900(In)
      ------------------------------------------------------------------
---

                     U n i t  H y d r o g r a p h
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+++
      Interval          'S' Graph          Unit Hydrograph
      Number            Mean values             ((CFS))
      ------------------------------------------------------------------
---
                (K =       382.04 (CFS))

        1                6.828                  26.086
        2               34.241                 104.729
        3               53.812                  74.769
        4               63.412                  36.675
        5               69.929                  24.899
        6               74.936                  19.129
        7               78.803                  14.773
        8               81.823                  11.537
        9               84.264                   9.327
       10               86.308                   7.807
       11               88.171                   7.119
       12               89.787                   6.173
       13               91.208                   5.430
       14               92.506                   4.960
       15               93.668                   4.438
       16               94.719                   4.017
       17               95.623                   3.454
       18               96.455                   3.176
       19               97.281                   3.156
       20               98.107                   3.156
       21               98.933                   3.156
       22              100.000                   1.578
      ------------------------------------------------------------------
---
      ------------------------------------------------------------------
--
      ------------------------------------------------------------------
--
      Total soil rain loss =      0.64(In)
      Total effective rainfall =      5.26(In)
      Peak flow rate in flood hydrograph =     81.24(CFS)
      ------------------------------------------------------------------
---
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
```

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	22.5	45.0	67.5	90.0
0+ 5	0.0017	0.25	Q				
0+10	0.0104	1.26	Q				
0+15	0.0241	1.98	Q				
0+20	0.0402	2.34	VQ				
0+25	0.0581	2.59	VQ				
0+30	0.0772	2.78	VQ				
0+35	0.0974	2.93	VQ				
0+40	0.1184	3.05	VQ				
0+45	0.1400	3.14	VQ				
0+50	0.1622	3.23	VQ				
0+55	0.1850	3.30	VQ				
1+ 0	0.2082	3.37	VQ				
1+ 5	0.2319	3.43	VQ				
1+10	0.2559	3.49	VQ				
1+15	0.2803	3.54	VQ				
1+20	0.3050	3.59	VQ				
1+25	0.3300	3.63	VQ				
1+30	0.3553	3.67	|Q				
1+35	0.3809	3.71	|Q				
1+40	0.4067	3.75	|Q				
1+45	0.4328	3.79	|Q				
1+50	0.4591	3.82	|Q				

1+55	0.4855	3.83	|Q	|	|	|
2+ 0	0.5119	3.84	|Q	|	|	|
2+ 5	0.5384	3.85	|Q	|	|	|
2+10	0.5650	3.86	|Q	|	|	|
2+15	0.5917	3.87	|Q	|	|	|
2+20	0.6184	3.88	|Q	|	|	|
2+25	0.6452	3.89	|Q	|	|	|
2+30	0.6721	3.90	|Q	|	|	|
2+35	0.6990	3.91	|QV	|	|	|
2+40	0.7260	3.92	|QV	|	|	|
2+45	0.7531	3.93	|QV	|	|	|
2+50	0.7803	3.95	|QV	|	|	|
2+55	0.8076	3.96	|QV	|	|	|
3+ 0	0.8349	3.97	|QV	|	|	|
3+ 5	0.8623	3.98	|QV	|	|	|
3+10	0.8898	3.99	|QV	|	|	|
3+15	0.9174	4.00	|QV	|	|	|
3+20	0.9450	4.02	|QV	|	|	|
3+25	0.9728	4.03	|QV	|	|	|
3+30	1.0006	4.04	|QV	|	|	|
3+35	1.0285	4.05	|QV	|	|	|
3+40	1.0565	4.06	|Q V	|	|	|
3+45	1.0845	4.08	|Q V	|	|	|
3+50	1.1127	4.09	|Q V	|	|	|
3+55	1.1410	4.10	|Q V	|	|	|
4+ 0	1.1693	4.11	|Q V	|	|	|
4+ 5	1.1977	4.13	|Q V	|	|	|
4+10	1.2262	4.14	|Q V	|	|	|

4+15	1.2548	4.15	|Q V	|	|	|
4+20	1.2835	4.17	|Q V	|	|	|
4+25	1.3123	4.18	|Q V	|	|	|
4+30	1.3412	4.19	|Q V	|	|	|
4+35	1.3702	4.21	|Q V	|	|	|
4+40	1.3993	4.22	|Q V	|	|	|
4+45	1.4284	4.24	|Q V	|	|	|
4+50	1.4577	4.25	|Q V	|	|	|
4+55	1.4871	4.26	|Q V	|	|	|
5+ 0	1.5165	4.28	|Q V	|	|	|
5+ 5	1.5461	4.29	|Q V	|	|	|
5+10	1.5758	4.31	|Q V	|	|	|
5+15	1.6055	4.32	|Q V	|	|	|
5+20	1.6354	4.34	|Q V	|	|	|
5+25	1.6654	4.35	|Q V	|	|	|
5+30	1.6955	4.37	|Q V	|	|	|
5+35	1.7257	4.38	|Q V	|	|	|
5+40	1.7560	4.40	|Q V	|	|	|
5+45	1.7864	4.42	|Q V	|	|	|
5+50	1.8169	4.43	|Q V	|	|	|
5+55	1.8475	4.45	|Q V	|	|	|
6+ 0	1.8783	4.47	|Q V	|	|	|
6+ 5	1.9092	4.48	|Q V	|	|	|
6+10	1.9401	4.50	|Q V	|	|	|
6+15	1.9712	4.52	| Q V	|	|	|
6+20	2.0025	4.53	| Q V	|	|	|
6+25	2.0338	4.55	| Q V	|	|	|
6+30	2.0653	4.57	| Q V	|	|	|

6+35	2.0969	4.59	Q	V			
6+40	2.1286	4.60	Q	V			
6+45	2.1604	4.62	Q	V			
6+50	2.1924	4.64	Q	V			
6+55	2.2245	4.66	Q	V			
7+ 0	2.2567	4.68	Q	V			
7+ 5	2.2891	4.70	Q	V			
7+10	2.3216	4.72	Q	V			
7+15	2.3542	4.74	Q	V			
7+20	2.3870	4.76	Q	V			
7+25	2.4199	4.78	Q	V			
7+30	2.4530	4.80	Q	V			
7+35	2.4862	4.82	Q	V			
7+40	2.5195	4.84	Q	V			
7+45	2.5530	4.86	Q	V			
7+50	2.5867	4.89	Q	V			
7+55	2.6205	4.91	Q	V			
8+ 0	2.6544	4.93	Q	V			
8+ 5	2.6886	4.95	Q	V			
8+10	2.7228	4.98	Q	V			
8+15	2.7573	5.00	Q	V			
8+20	2.7919	5.03	Q	V			
8+25	2.8267	5.05	Q	V			
8+30	2.8616	5.07	Q	V			
8+35	2.8967	5.10	Q	V			
8+40	2.9320	5.12	Q	V			
8+45	2.9675	5.15	Q	V			
8+50	3.0032	5.18	Q	V			

8+55	3.0390	5.20	Q	V			
9+ 0	3.0750	5.23	Q	V			
9+ 5	3.1112	5.26	Q	V			
9+10	3.1476	5.29	Q	V			
9+15	3.1842	5.31	Q	V			
9+20	3.2211	5.34	Q	V			
9+25	3.2581	5.37	Q	V			
9+30	3.2953	5.40	Q	V			
9+35	3.3327	5.43	Q	V			
9+40	3.3704	5.47	Q	V			
9+45	3.4082	5.50	Q	V			
9+50	3.4463	5.53	Q	V			
9+55	3.4846	5.56	Q	V			
10+ 0	3.5232	5.60	Q	V			
10+ 5	3.5619	5.63	Q	V			
10+10	3.6010	5.67	Q	V			
10+15	3.6402	5.70	Q	V			
10+20	3.6797	5.74	Q	V			
10+25	3.7195	5.77	Q	V			
10+30	3.7595	5.81	Q	V			
10+35	3.7998	5.85	Q	V			
10+40	3.8404	5.89	Q	V			
10+45	3.8813	5.93	Q	V			
10+50	3.9224	5.97	Q	V			
10+55	3.9638	6.01	Q	V			
11+ 0	4.0055	6.06	Q	V			
11+ 5	4.0476	6.10	Q	V			
11+10	4.0899	6.15	Q	V			

11+15	4.1326	6.19	Q	V		
11+20	4.1755	6.24	Q	V		
11+25	4.2188	6.29	Q	V		
11+30	4.2625	6.34	Q	V		
11+35	4.3065	6.39	Q	V		
11+40	4.3509	6.44	Q	V		
11+45	4.3956	6.49	Q	V		
11+50	4.4407	6.55	Q	V		
11+55	4.4862	6.61	Q	V		
12+ 0	4.5321	6.67	Q	V		
12+ 5	4.5779	6.65	Q	V		
12+10	4.6221	6.42	Q	V		
12+15	4.6653	6.27	Q	V		
12+20	4.7082	6.23	Q	V		
12+25	4.7510	6.22	Q	V		
12+30	4.7940	6.24	Q	V		
12+35	4.8372	6.27	Q	V		
12+40	4.8806	6.31	Q	V		
12+45	4.9244	6.36	Q	V		
12+50	4.9686	6.42	Q	V		
12+55	5.0133	6.48	Q	V		
13+ 0	5.0584	6.55	Q	V		
13+ 5	5.1040	6.62	Q	V		
13+10	5.1501	6.70	Q	V		
13+15	5.1969	6.78	Q	V		
13+20	5.2442	6.88	Q	V		
13+25	5.2922	6.97	Q	V		
13+30	5.3409	7.07	Q	V		

13+35	5.3903	7.18	Q	V		
13+40	5.4406	7.29	Q	V		
13+45	5.4916	7.41	Q	V		
13+50	5.5435	7.54	Q	V		
13+55	5.5963	7.67	Q	V		
14+ 0	5.6502	7.83	Q	V		
14+ 5	5.7052	7.98	Q	V		
14+10	5.7613	8.16	Q	V		
14+15	5.8187	8.33	Q	V		
14+20	5.8774	8.53	Q	V		
14+25	5.9375	8.72	Q	V		
14+30	5.9991	8.94	Q	V		
14+35	6.0623	9.17	Q	V		
14+40	6.1272	9.43	Q	V		
14+45	6.1939	9.69	Q	V		
14+50	6.2627	9.99	Q	V		
14+55	6.3336	10.30	Q	V		
15+ 0	6.4071	10.66	Q	V		
15+ 5	6.4831	11.04	Q	V		
15+10	6.5623	11.49	Q	V		
15+15	6.6447	11.97	Q	V		
15+20	6.7311	12.54	Q	V		
15+25	6.8192	12.79	Q	V		
15+30	6.9024	12.08	Q	V		
15+35	6.9840	11.84	Q	V		
15+40	7.0691	12.36	Q	V		
15+45	7.1603	13.25	Q	V		
15+50	7.2622	14.79	Q	V		

| | | |

18+15	11.3300	6.96	Q			V
18+20	11.3774	6.89	Q			V
18+25	11.4242	6.80	Q			V
18+30	11.4704	6.70	Q			V
18+35	11.5158	6.60	Q			V
18+40	11.5606	6.50	Q			V
18+45	11.6048	6.41	Q			V
18+50	11.6483	6.32	Q			V
18+55	11.6912	6.23	Q			V
19+ 0	11.7335	6.15	Q			V
19+ 5	11.7753	6.06	Q			V
19+10	11.8165	5.99	Q			V
19+15	11.8572	5.91	Q			V
19+20	11.8974	5.84	Q			V
19+25	11.9372	5.77	Q			V
19+30	11.9764	5.70	Q			V
19+35	12.0153	5.64	Q			V
19+40	12.0537	5.58	Q			V
19+45	12.0917	5.52	Q			V
19+50	12.1293	5.46	Q			V
19+55	12.1665	5.40	Q			V
20+ 0	12.2032	5.34	Q			V
20+ 5	12.2396	5.28	Q			V
20+10	12.2756	5.22	Q			V
20+15	12.3112	5.17	Q			V
20+20	12.3464	5.12	Q			V
20+25	12.3813	5.07	Q			V
20+30	12.4158	5.02	Q			V

20+35	12.4500	4.97	Q				V
20+40	12.4839	4.92	Q				V
20+45	12.5175	4.88	Q				V
20+50	12.5508	4.83	Q				V
20+55	12.5838	4.79	Q				V
21+ 0	12.6165	4.75	Q				V
21+ 5	12.6490	4.71	Q				V
21+10	12.6812	4.67	Q				V
21+15	12.7131	4.63	Q				V
21+20	12.7447	4.60	Q				V
21+25	12.7761	4.56	Q				V
21+30	12.8073	4.52	Q				V
21+35	12.8382	4.49	Q				V
21+40	12.8689	4.46	Q				V
21+45	12.8994	4.42	Q				V
21+50	12.9296	4.39	Q				V
21+55	12.9596	4.36	Q				V
22+ 0	12.9894	4.33	Q				V
22+ 5	13.0191	4.30	Q				V
22+10	13.0485	4.27	Q				V
22+15	13.0777	4.24	Q				V
22+20	13.1067	4.21	Q				V
22+25	13.1355	4.19	Q				V
22+30	13.1642	4.16	Q				V
22+35	13.1926	4.13	Q				V
22+40	13.2209	4.11	Q				V
22+45	13.2490	4.08	Q				V
22+50	13.2770	4.06	Q				V

```
   22+55      13.3047      4.03  |Q        |         |         |        V
|
   23+ 0      13.3323      4.01  |Q        |         |         |        V
|
   23+ 5      13.3598      3.98  |Q        |         |         |        V
|
   23+10      13.3871      3.96  |Q        |         |         |        V
|
   23+15      13.4142      3.94  |Q        |         |         |        V
|
   23+20      13.4412      3.92  |Q        |         |         |
V|
   23+25      13.4680      3.89  |Q        |         |         |
V|
   23+30      13.4947      3.87  |Q        |         |         |
V|
   23+35      13.5212      3.85  |Q        |         |         |
V|
   23+40      13.5476      3.83  |Q        |         |         |
V|
   23+45      13.5738      3.81  |Q        |         |         |
V|
   23+50      13.5999      3.79  |Q        |         |         |
V|
   23+55      13.6259      3.77  |Q        |         |         |
V|
   24+ 0      13.6518      3.75  |Q        |         |         |
V|
   24+ 5      13.6757      3.48  |Q        |         |         |
V|
   24+10      13.6926      2.46  |Q        |         |         |
V|
   24+15      13.7045      1.72  Q         |         |         |
V|
   24+20      13.7139      1.36  Q         |         |         |
V|
   24+25      13.7216      1.12  Q         |         |         |
V|
   24+30      13.7280      0.93  Q         |         |         |
V|
   24+35      13.7333      0.78  Q         |         |         |
V|
   24+40      13.7379      0.66  Q         |         |         |
V|
   24+45      13.7418      0.57  Q         |         |         |
V|
   24+50      13.7452      0.49  Q         |         |         |
V|
   24+55      13.7481      0.42  Q         |         |         |
V|
   25+ 0      13.7506      0.36  Q         |         |         |
V|
   25+ 5      13.7527      0.31  Q         |         |         |
V|
   25+10      13.7545      0.26  Q         |         |         |
V|
```

```
   25+15      13.7559      0.21  Q         |         |         |
V|
   25+20      13.7571      0.17  Q         |         |         |
V|
   25+25      13.7581      0.14  Q         |         |         |
V|
   25+30      13.7588      0.11  Q         |         |         |
V|
   25+35      13.7594      0.08  Q         |         |         |
V|
   25+40      13.7597      0.05  Q         |         |         |
V|
   25+45      13.7598      0.02  Q         |         |         |
V
------------------------------------------------------------------------
```

3.1 INFILTRATION BASIN

Type of BMP	LID - Infiltration
Treatment Mechanisms	Infiltration, Evapotranspiration (when vegetated), Evaporation, and Sedimentation
Maximum Treatment Area	50 acres
Other Names	Bioinfiltration Basin

Description

An Infiltration Basin is a flat earthen basin designed to capture the design capture volume, V_{BMP}. The stormwater infiltrates through the bottom of the basin into the underlying soil over a 72 hour drawdown period. Flows exceeding V_{BMP} must discharge to a downstream conveyance system. Trash and sediment accumulate within the forebay as stormwater passes into the basin. Infiltration basins are highly effective in removing all targeted pollutants from stormwater runoff.



Figure 1 – Infiltration Basin

See Appendix A, and Appendix C, Section 1 of *Basin Guidelines*, for additional requirements.

Siting Considerations

The use of infiltration basins may be restricted by concerns over ground water contamination, soil permeability, and clogging at the site. See the applicable WQMP for any specific feasibility considerations for using infiltration BMPs. Where this BMP is being used, the soil beneath the basin must be thoroughly evaluated in a geotechnical report since the underlying soils are critical to the basin's long term performance. To protect the basin from erosion, the sides and bottom of the basin must be vegetated, preferably with native or low water use plant species.

In addition, these basins may not be appropriate for the following site conditions:

- Industrial sites or locations where spills of toxic materials may occur
- Sites with very low soil infiltration rates
- Sites with high groundwater tables or excessively high soil infiltration rates, where pollutants can affect ground water quality
- Sites with unstabilized soil or construction activity upstream
- On steeply sloping terrain
- Infiltration basins located in a fill condition should refer to Appendix A of this Handbook for details on special requirements/restrictions

Setbacks

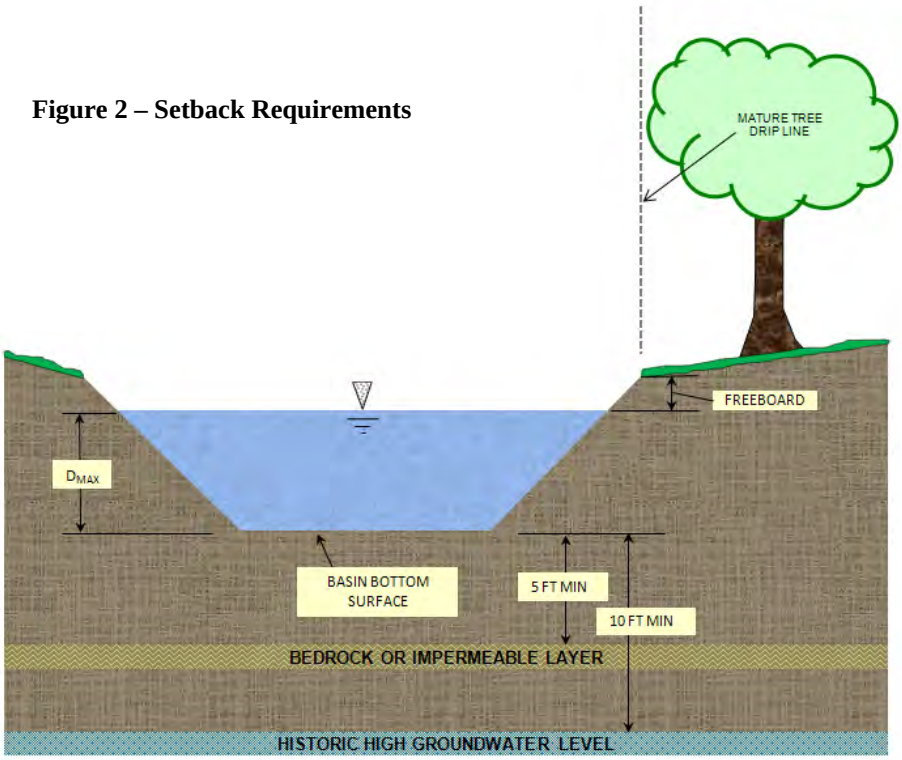
Always consult your geotechnical engineer for site specific recommendations regarding setbacks for infiltration trenches. Recommended setbacks are needed to protect buildings, existing trees, walls, onsite or nearby wells, streams, and tanks. Setbacks should be considered early in the design process since they can affect where infiltration facilities may be placed and how deep they are allowed to be. For instance, depth setbacks can dictate fairly shallow facilities that will have a larger footprint and, in some cases, may make an infiltration basin infeasible. In that instance, another BMP must be selected.

Infiltration basins typically must be set back:

- 10 feet from the historic high groundwater (measured vertically from the bottom of the basin, as shown in Figure 2)
- 5 feet from bedrock or impermeable surface layer (measured vertically from the bottom of the basin, as shown in Figure 2)
- From all existing mature tree drip lines as indicated in Figure 2 (to protect their root structure)
- 100 feet horizontally from wells, tanks or springs

Setbacks to walls and foundations must be included as part of the Geotechnical Report. All other setbacks shall be in accordance with applicable standards of the District's *Basin Guidelines* (Appendix C).

Figure 2 – Setback Requirements



Forebay

A concrete forebay shall be provided to reduce sediment clogging and to reduce erosion. The forebay shall have a design volume of at least 0.5% V_{BMP} and a minimum 1 foot high concrete splashwall / berm. Full height notch-type weir(s), offset from the line of flow from the basin inlet to prevent short circuiting, shall be used to outlet the forebay. It is recommended that two weirs be used and that they be located on opposite sides of the forebay (see Figure 2).

Overflow

Flows exceeding V_{BMP} must discharge to an acceptable downstream conveyance system. Where an adequate outlet is present, an overflow structure may be used. Where an embankment is present, an emergency spillway may be used instead. Overflows must be placed just above the design water surface for V_{BMP} and be near the outlet of the system. The overflow structure shall be similar to the District's Standard Drawing CB 110. Additional details may be found in the District's *Basin Guidelines* (Appendix C).

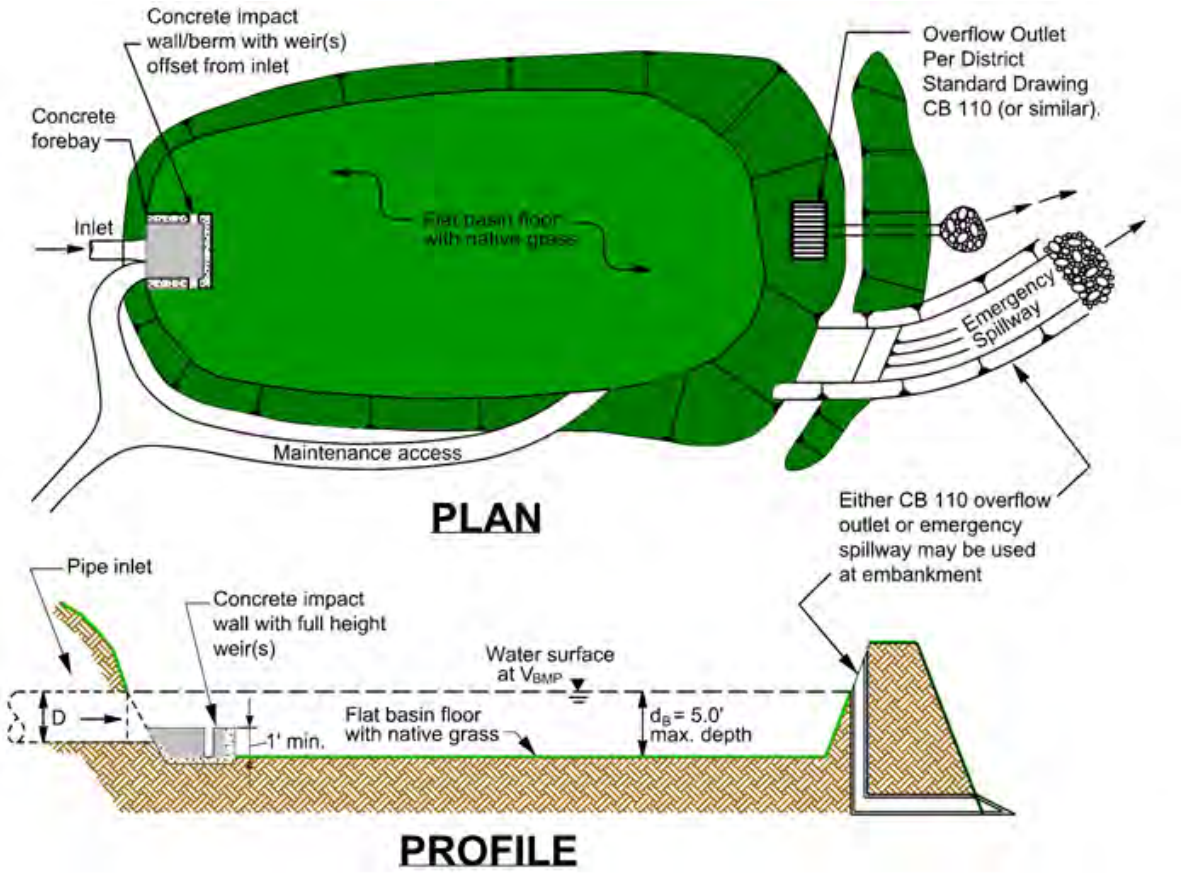


Figure 3 – Infiltration Basin

Landscaping Requirements

Basin vegetation provides erosion protection, improves sediment removal and assists in allowing infiltration to occur. The basin surface and side slopes shall be planted with native grasses. Proper landscape management is also required to ensure that the vegetation does not contribute to water pollution through pesticides, herbicides, or fertilizers. Landscaping shall be in accordance with County of Riverside Ordinance 859 and the District's *Basin Guidelines* (Appendix C), or other guidelines issued by the Engineering Authority.

Maintenance

Normal maintenance of an infiltration basin includes the maintenance of landscaping, debris and trash removal from the surface of the basin, and tending to problems associated with standing water (vectors, odors, etc.). Significant ponding, especially more than 72 hours after an event, may indicate that the basin surface is no longer providing sufficient infiltration and requires aeration. See the District's *Basin Guidelines* (Appendix C) for additional requirements (i.e., fencing, maintenance access, etc.).

Table 1 - Inspection and Maintenance

Schedule	Inspection and Maintenance Activity
Ongoing including just before annual storm seasons and following rainfall events.	• Maintain vegetation as needed. Use of fertilizers, pesticides and herbicides should be strenuously avoided to ensure they don't contribute to water pollution. If appropriate native plant selections and other IPM methods are used, such products shouldn't be needed. If such projects are used, o Products shall be applied in accordance with their labeling, especially in relation to application to water, and in areas subjected to flooding. o Fertilizers should not be applied within 15 days before, after, or during the rain season. • Remove debris and litter from the entire basin to minimize clogging and improve aesthetics. • Check for obvious problems and repair as needed. Address odor, insects, and overgrowth issues associated with stagnant or standing water in the basin bottom. There should be no long-term ponding water. • Check for erosion and sediment laden areas in the basin. Repair as needed. Clean forebay if needed. • Revegetate side slopes where needed.
Annually. If possible, schedule these inspections within 72 hours after a significant rainfall.	• Inspection of hydraulic and structural facilities. Examine the inlet for blockage, the embankment and spillway integrity, as well as damage to any structural element. • Check for erosion, slumping and overgrowth. Repair as needed. • Check basin depth for sediment build up and reduced total capacity. Scrape bottom as needed and remove sediment. Restore to original cross-section and infiltration rate. Replant basin vegetation. • Verify the basin bottom is allowing acceptable infiltration. Use a disc or other method to aerate basin bottom only if there is actual significant loss of infiltrative capacity, rather than on a routine basis[1]. • No water should be present 72 hours after an event. No long term standing water should be present at all. No algae formation should be visible. Correct problem as needed.

1. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**

Table 2 - Design and Sizing Criteria for Infiltration Basins

Design Parameter	Infiltration Basin
Design Volume	V_{BMP}
Forebay Volume	0.5% V_{BMP}
Drawdown time (maximum)	72 hours
Maximum tributary area	50 acres [2]
Minimum infiltration rate	Must be sufficient to drain the basin within the required Drawdown time over the life of the BMP. The WQMP may include specific requirements for minimum tested infiltration rates.
Maximum Depth	5 feet
Spillway erosion control	Energy dissipators to reduce velocities[1]
Basin Slope	0%
Freeboard (minimum)	1 foot [1]
Historic High Groundwater Setback (max)	10 feet
Bedrock/impermeable layer setback (max)	5 feet
Tree setbacks	Mature tree drip line must not overhang the basin
Set back from wells, tanks or springs	100 feet
Set back from foundations	As recommended in Geotechnical Report

1. **Ventura County's Technical Guidance Manual for Stormwater Quality Control Measures**
2. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**

Note: The information contained in this BMP Factsheet is intended to be a summary of design considerations and requirements. Additional information which applies to all detention basins may be found in the District's Basin Guidelines (Appendix C). In addition, information herein may be superseded by other guidelines issued by the co-permittee.

INFILTRATION BASIN SIZING PROCEDURE

1. Find the Design Volume, V_{BMP}.
   a) Enter the Tributary Area, $A_{T.}$
   b) Enter the Design Volume, V_{BMP}, determined from Section 2.1 of this Handbook.
2. Determine the Maximum Depth.
   a) Enter the infiltration rate. The infiltration rate shall be established as described in Appendix A: "Infiltration Testing".
   b) Enter the design Factor of Safety from Table 1 in Appendix A: "Infiltration Testing".
   c) The spreadsheet will determine D_1, the maximum allowable depth of the basin based on the infiltration rate along with the maximum drawdown time (72 hours) and the Factor of Safety.

$$D_1 = [(t) \times (I)] / 12s$$

Where I = site infiltration rate (in/hr)
s = safety factor
t = drawdown time (maximum 72 hours)

d) Enter the depth of freeboard.

e) Enter the depth to the historic high groundwater level measured from the top of the basin.

f) Enter the depth to the top of bedrock or other impermeable layer measured from the finished grade.

g) The spreadsheet will determine D_2, the total basin depth (including freeboard, if used) of the basin, based on restrictions to the depth by groundwater and an impermeable layer.

D_2 = Depth to groundwater – (10 + freeboard) (ft);

or

D_2 = Depth to impermeable layer – (5 + freeboard) (ft)

Whichever is least.

h) The spreadsheet will determine the maximum allowable effective depth of basin, D_{MAX}, based on the smallest value between D_1 and D_2. D_{MAX} is the maximum depth of water only and does not include freeboard. D_{MAX} shall not exceed 5 feet.

3. Basin Geometry

a) Enter the basin side slopes, z (no steeper than 4:1).

b) Enter the proposed basin depth, d_B excluding freeboard.

c) The spreadsheet will determine the minimum required surface area of the basin:

$$A_s = V_{BMP} / d_B$$

Where A_s = minimum area required (ft^2)
V_{BMP} = volume of the infiltration basin (ft^3)
d_B= proposed depth not to exceed maximum allowable depth, D_{MAX} (ft)

d) Enter the proposed bottom surface area. This area shall not be less than the minimum required surface area.

4. Forebay

A concrete forebay with a design volume of at least 0.5% V_{BMP} and a minimum 1 foot high concrete splashwall shall be provided. Full-height rectangular weir(s) shall be used to outlet the forebay. The weir(s) must be offset from the line of flow from the basin inlet. It is recommended that two weirs be used and that they be located on opposite sides of the forebay (see Figure 2).

a) The spreadsheet will determine the minimum required forebay volume based on 0.5% V_{BMP}.

b) Enter the proposed depth of the forebay berm/splashwall (1foot minimum).

c) The spreadsheet will determine the minimum required forebay surface area.

d) Enter the width of rectangular weir to be used (minimum 1.5 inches). Weir width should be established based on a 5 minute drawdown time.

NOAA Atlas 14, Volume 6, Version 2
Location name: Hesperia, California, USA*
Latitude: 34.4371°, Longitude: -117.3766°
Elevation: 3440.77 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.083** (0.068-0.101)	**0.118** (0.098-0.145)	**0.166** (0.136-0.203)	**0.204** (0.167-0.252)	**0.257** (0.203-0.329)	**0.299** (0.231-0.390)	**0.341** (0.257-0.456)	**0.385** (0.283-0.529)	**0.445** (0.314-0.638)	**0.493** (0.335-0.731)
10-min	**0.118** (0.098-0.145)	**0.170** (0.140-0.207)	**0.237** (0.196-0.291)	**0.293** (0.239-0.362)	**0.369** (0.292-0.471)	**0.428** (0.331-0.558)	**0.488** (0.369-0.653)	**0.552** (0.405-0.759)	**0.638** (0.449-0.915)	**0.706** (0.481-1.05)
15-min	**0.143** (0.119-0.175)	**0.205** (0.170-0.251)	**0.287** (0.236-0.352)	**0.354** (0.289-0.437)	**0.446** (0.353-0.570)	**0.517** (0.400-0.675)	**0.591** (0.446-0.790)	**0.667** (0.490-0.917)	**0.772** (0.544-1.11)	**0.854** (0.581-1.27)
30-min	**0.217** (0.180-0.265)	**0.311** (0.257-0.380)	**0.435** (0.359-0.533)	**0.537** (0.439-0.664)	**0.677** (0.535-0.865)	**0.785** (0.608-1.02)	**0.896** (0.677-1.20)	**1.01** (0.743-1.39)	**1.17** (0.824-1.68)	**1.30** (0.881-1.92)
60-min	**0.302** (0.250-0.369)	**0.433** (0.358-0.530)	**0.606** (0.499-0.743)	**0.747** (0.611-0.924)	**0.942** (0.744-1.20)	**1.09** (0.846-1.43)	**1.25** (0.942-1.67)	**1.41** (1.03-1.94)	**1.63** (1.15-2.34)	**1.80** (1.23-2.68)
2-hr	**0.434** (0.359-0.530)	**0.590** (0.488-0.722)	**0.802** (0.661-0.983)	**0.979** (0.800-1.21)	**1.23** (0.971-1.57)	**1.43** (1.11-1.86)	**1.64** (1.24-2.19)	**1.86** (1.36-2.55)	**2.17** (1.53-3.11)	**2.42** (1.64-3.58)
3-hr	**0.548** (0.453-0.669)	**0.733** (0.605-0.895)	**0.985** (0.812-1.21)	**1.20** (0.981-1.48)	**1.51** (1.19-1.92)	**1.75** (1.36-2.29)	**2.01** (1.52-2.69)	**2.29** (1.68-3.15)	**2.69** (1.89-3.85)	**3.01** (2.05-4.47)
6-hr	**0.766** (0.634-0.935)	**1.01** (0.838-1.24)	**1.36** (1.12-1.67)	**1.66** (1.35-2.05)	**2.09** (1.65-2.66)	**2.44** (1.89-3.18)	**2.81** (2.12-3.76)	**3.22** (2.37-4.43)	**3.81** (2.69-5.46)	**4.30** (2.93-6.38)
12-hr	**0.980** (0.811-1.20)	**1.34** (1.11-1.64)	**1.84** (1.51-2.25)	**2.27** (1.85-2.80)	**2.88** (2.28-3.69)	**3.39** (2.63-4.43)	**3.93** (2.97-5.26)	**4.53** (3.32-6.23)	**5.38** (3.79-7.72)	**6.09** (4.15-9.04)
24-hr	**1.34** (1.19-1.54)	**1.89** (1.68-2.18)	**2.66** (2.35-3.08)	**3.33** (2.91-3.88)	**4.28** (3.63-5.16)	**5.06** (4.20-6.22)	**5.90** (4.78-7.43)	**6.80** (5.36-8.81)	**8.11** (6.13-11.0)	**9.20** (6.72-12.8)
2-day	**1.50** (1.33-1.72)	**2.11** (1.87-2.44)	**2.98** (2.63-3.44)	**3.72** (3.26-4.34)	**4.81** (4.08-5.80)	**5.71** (4.74-7.03)	**6.69** (5.42-8.42)	**7.75** (6.10-10.0)	**9.30** (7.03-12.6)	**10.6** (7.74-14.8)
3-day	**1.60** (1.42-1.84)	**2.25** (1.99-2.60)	**3.17** (2.80-3.66)	**3.96** (3.47-4.62)	**5.13** (4.35-6.18)	**6.10** (5.06-7.50)	**7.15** (5.79-9.01)	**8.31** (6.54-10.8)	**10.00** (7.56-13.5)	**11.4** (8.34-15.9)
4-day	**1.73** (1.53-1.99)	**2.42** (2.15-2.79)	**3.40** (3.00-3.93)	**4.26** (3.73-4.96)	**5.51** (4.67-6.63)	**6.55** (5.43-8.05)	**7.67** (6.22-9.67)	**8.91** (7.02-11.5)	**10.7** (8.11-14.5)	**12.3** (8.96-17.1)
7-day	**1.92** (1.70-2.21)	**2.66** (2.36-3.07)	**3.71** (3.28-4.29)	**4.62** (4.05-5.38)	**5.95** (5.04-7.16)	**7.05** (5.85-8.66)	**8.24** (6.67-10.4)	**9.54** (7.52-12.4)	**11.4** (8.65-15.4)	**13.0** (9.53-18.2)
10-day	**2.05** (1.82-2.36)	**2.84** (2.52-3.27)	**3.94** (3.48-4.55)	**4.89** (4.28-5.70)	**6.27** (5.31-7.55)	**7.41** (6.15-9.11)	**8.64** (7.00-10.9)	**9.99** (7.87-12.9)	**12.0** (9.04-16.1)	**13.6** (9.93-19.0)
20-day	**2.49** (2.21-2.87)	**3.42** (3.03-3.94)	**4.71** (4.16-5.44)	**5.82** (5.10-6.78)	**7.43** (6.30-8.95)	**8.76** (7.27-10.8)	**10.2** (8.25-12.8)	**11.7** (9.25-15.2)	**14.0** (10.6-18.9)	**15.9** (11.6-22.2)
30-day	**2.94** (2.60-3.38)	**4.00** (3.54-4.61)	**5.48** (4.84-6.33)	**6.75** (5.91-7.87)	**8.59** (7.28-10.3)	**10.1** (8.39-12.4)	**11.7** (9.50-14.8)	**13.5** (10.6-17.5)	**16.1** (12.2-21.7)	**18.3** (13.4-25.5)
45-day	**3.48** (3.08-4.00)	**4.68** (4.14-5.39)	**6.34** (5.60-7.33)	**7.78** (6.81-9.06)	**9.85** (8.35-11.9)	**11.5** (9.59-14.2)	**13.4** (10.8-16.9)	**15.4** (12.1-20.0)	**18.3** (13.9-24.8)	**20.8** (15.2-29.1)
60-day	**3.95** (3.50-4.55)	**5.24** (4.64-6.03)	**7.01** (6.19-8.11)	**8.55** (7.48-9.96)	**10.8** (9.12-13.0)	**12.6** (10.4-15.5)	**14.6** (11.8-18.3)	**16.7** (13.2-21.7)	**19.9** (15.1-26.9)	**22.6** (16.5-31.6)

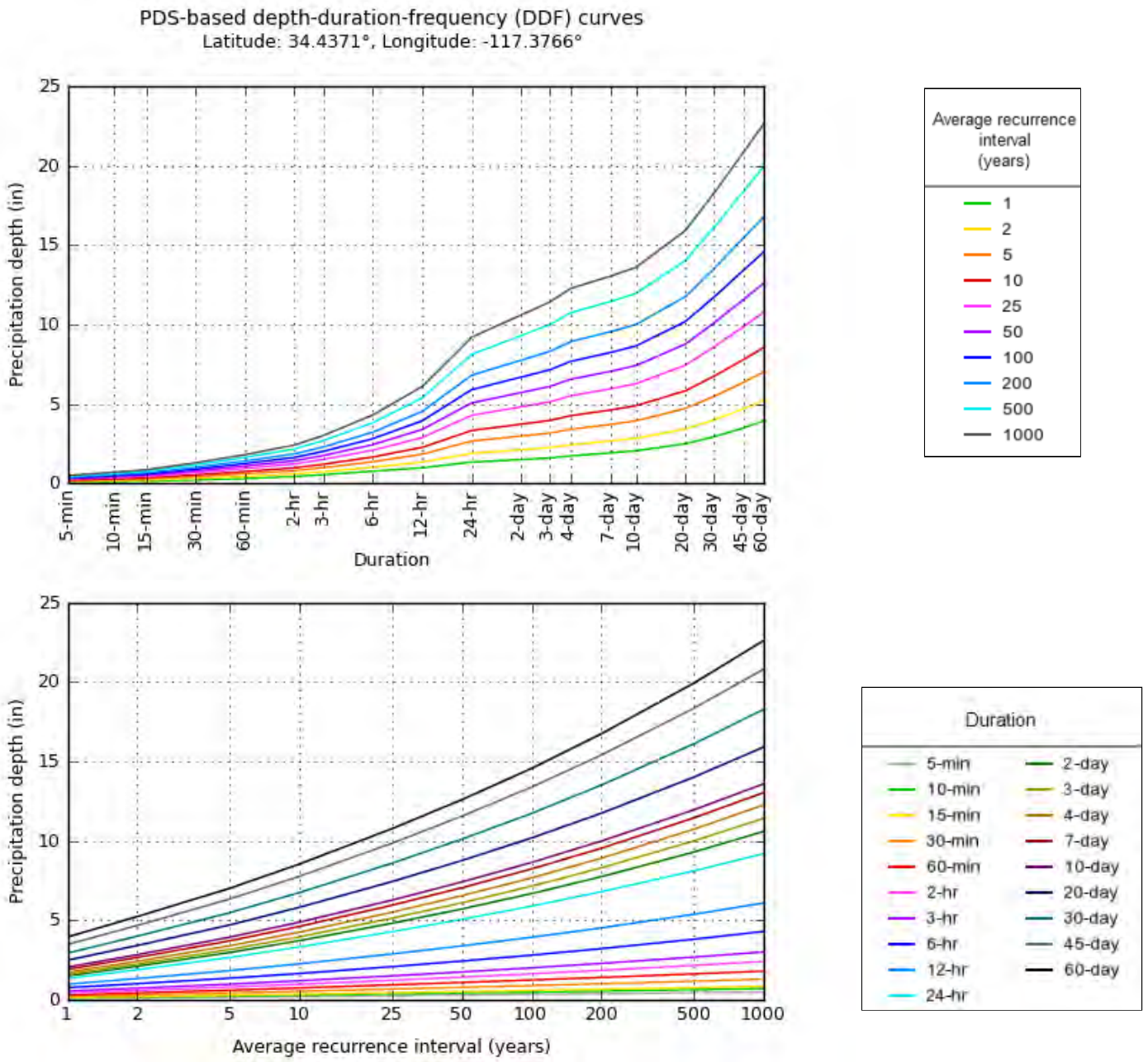
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



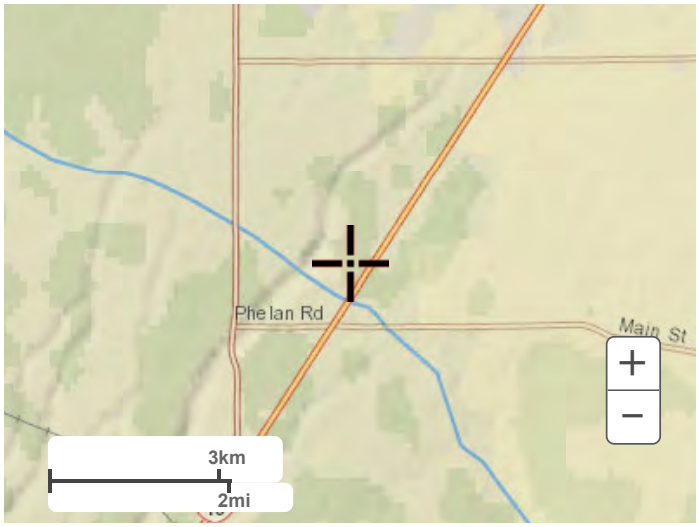
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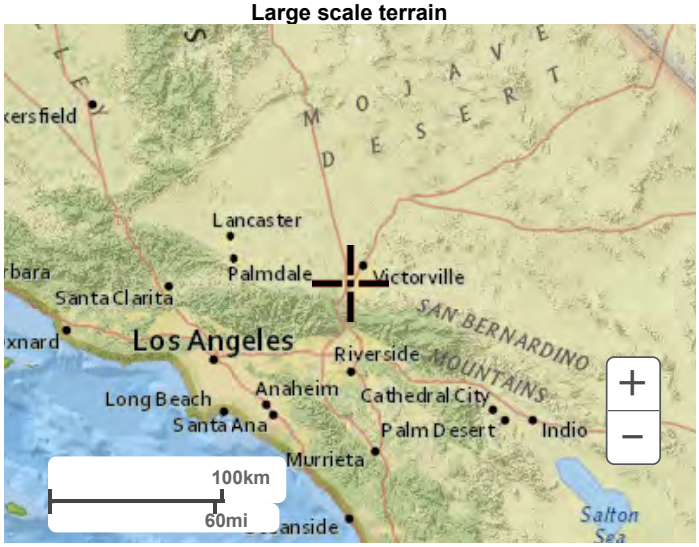
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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Appendix J – Noise Impact & Vibration Analysis

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE

Noise and Vibration Analysis

Prepared By:

Haseeb Qureshi | hqureshi@urbanxroads.com
Bill Maddux, INCE | bmaddux@urbanxroads.com
Noah Johnson | njohnson@urbanxroads.com

Reference Number
14848-04 NA

Agency
City of Hesperia

Date
March 24, 2026

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LIST OF ABBREVIATED TERMS

(1)	Reference
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
Leq	Equivalent continuous (average) sound level
Lmax	Maximum level measured over the time interval
Lw	Sound power level
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Amargosa and Palmetto High-Cube Warehouse
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the Amargosa and Palmetto High-Cube Warehouse (Project) in the City of Hesperia. The Project is to consist of 499,714 square high-cube fulfillment center warehouse building in a single building. This noise study has been prepared to satisfy applicable City of Hesperia noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Noise and Vibration Analysis are summarized below based on the significance criteria in Section 4, Significance Criteria, of this report, consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	Less Than Significant	-
Operational Noise	9	Less Than Significant	-
Construction Noise	10	Less Than Significant	-
Nighttime Concrete Pour Noise	10	Less Than Significant	-
Construction Vibration	10	Less Than Significant	-

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1 INTRODUCTION

This Noise and Vibration Analysis has been completed to determine the noise impacts associated with the development of the Amargosa and Palmetto High-Cube Warehouse ("Project"). This noise and vibration analysis briefly describes the Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for noise analysis, evaluates the future exterior noise environment, potential off-site traffic impacts, the Project-related long-term stationary-source operational noise, and Project-related short-term construction noise and vibration impacts.

1.1 SITE LOCATION

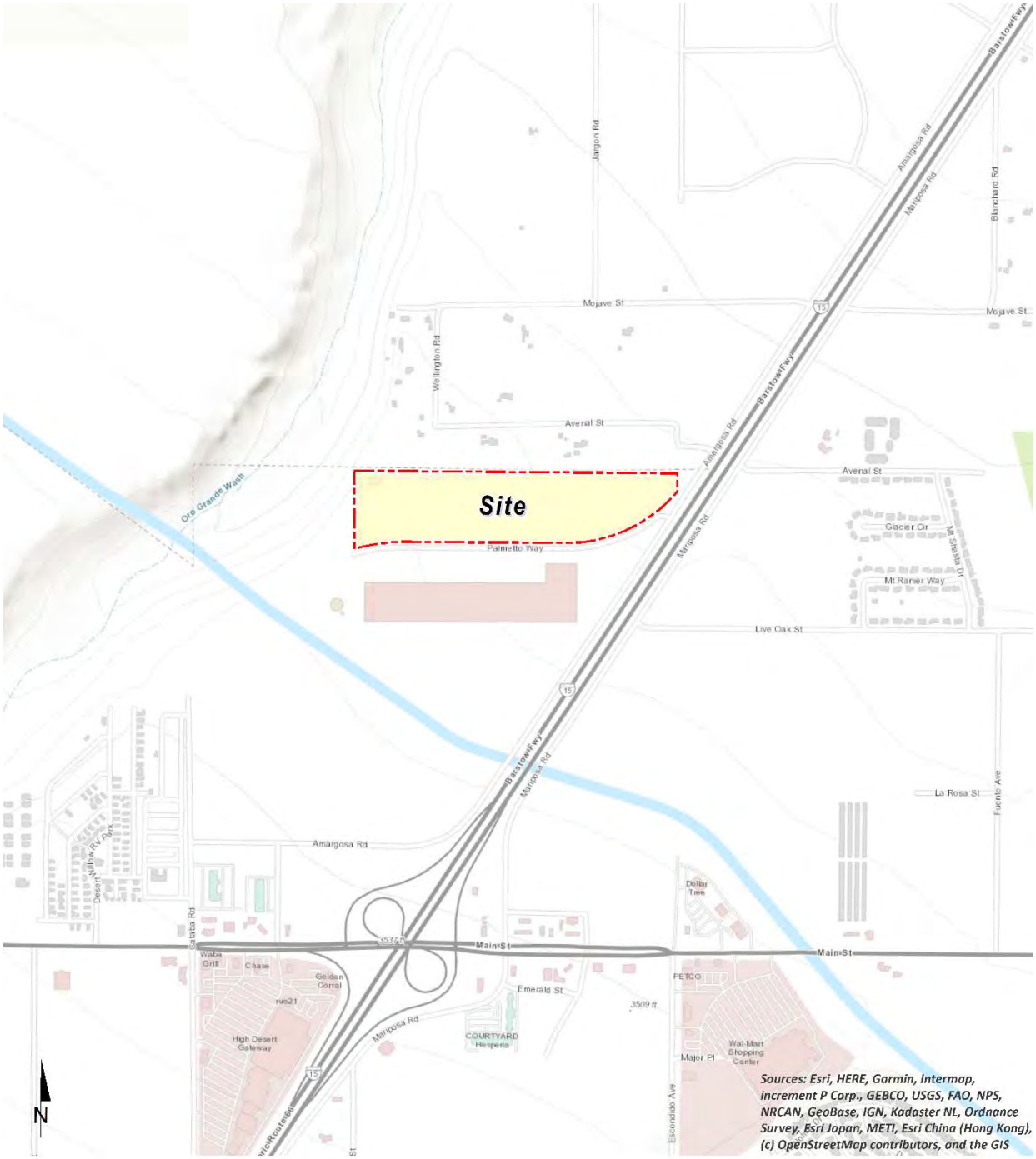
The proposed project is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as shown on Exhibit 1-1.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,714 square high-cube fulfillment center warehouse building as shown on Exhibit 1-2. The project is anticipated to be constructed and fully operational by year 2027.

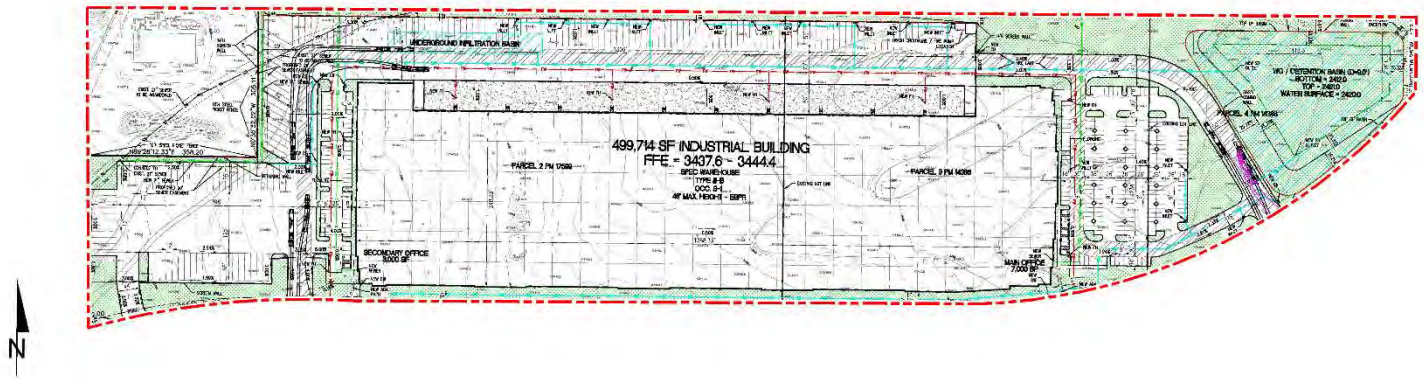
The on-site Project-related noise sources are expected to include: loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site.

EXHIBIT 1-1: PROJECT LOCATION



LEGEND:

EXHIBIT 1-2: SITE PLAN



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2 FUNDAMENTALS

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies that are audible to the human ear. Exhibit 2-1 presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) and 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA at approximately

1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are typically based on average noise levels over time, rather than instantaneous measurements. The most commonly used metric is the equivalent continuous sound level (L_{eq}). Rather than being measured directly, L_{eq} is calculated from A-weighted sound pressure levels (dBA) recorded over a specified period. The L_{eq} represents the constant sound level that, over a given time, would contain the same acoustic energy as the actual fluctuating sound levels. As such, it is widely used to describe average environmental noise exposure. Importantly, while sound pressure levels (e.g., L_{eq}) express the intensity of sound at a specific location and are affected by distance and environmental conditions, sound power levels (L_w) are intrinsic properties of the sound source itself. Unlike sound pressure, sound power is independent of distance and unaffected by obstacles, air absorption, or weather conditions. In contrast, sound pressure levels decrease with distance due to factors such as geometric spreading, absorption by air and surfaces, intervening barriers or obstacles, and meteorological conditions (e.g., wind, humidity).

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time but rather represents the total sound exposure. The City of Hesperia relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 Geometric Spreading

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical

spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 Ground Absorption

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 Shielding

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide, and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (5)

2.4 Noise Control

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must block the line-of-sight path of sound from the noise source.

2.6 Land Use Compatibility With Noise

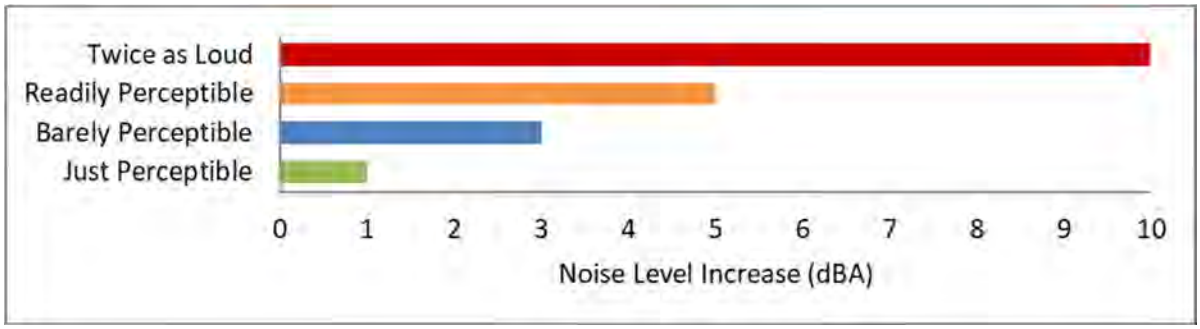
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 Community Response to Noise

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises, averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook , the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. (7) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels, as shown in Exhibit 2-2. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)

EXHIBIT 2-2: NOISE LEVEL INCREASE PERCEPTION



2.8 VIBRATION

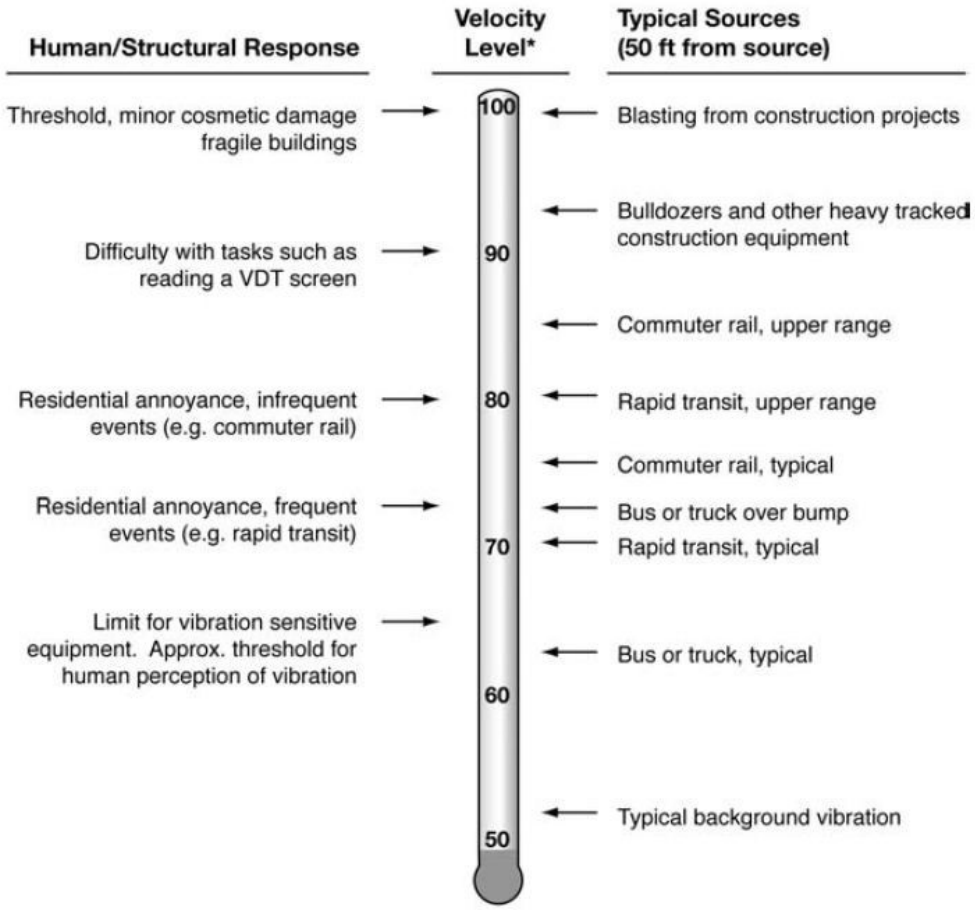
Per the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency. Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (8). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (8). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structurers reduce vibration levels due to the coupling of the building to the soil.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal (8). The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body (8). However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude of equipment is typically calculated from the PPV reference level. The RMS amplitude is approximately 70% of the PPV (9). Thus, either can be used in the description of vibration impacts.

While not universally accepted, vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a

background of common vibration levels and set vibration limits. (8) Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels. As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-3 illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-3: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



** RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

Source: Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.

3 REGULATORY SETTING

The federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities, are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element, which is to be prepared per guidelines adopted by the Governor's Office of Land Use and Climate Innovation (LCI) (10) The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF HESPERIA GENERAL PLAN NOISE ELEMENT

The City of Hesperia has adopted a Noise Element of the General Plan (11) to control and abate environmental noise, and to protect the citizens of the City of Hesperia from excessive exposure to noise. The General Plan Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the City of Hesperia General Plan Noise Element identifies several goals and policies to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To limit the exposure of City residents to excessive noise, the City of Hesperia General Plan Noise Element contains the following two goals:

NS-1 To achieve and maintain an environment which is free from excessive or harmful noise through identification, control, and abatement.

NS-2 To achieve and maintain an environment which is free from excessive vibration.

To satisfy these two overarching goals, the General Plan Noise Element identifies the following implementation policies to reduce noise levels associated with the development of the Project.

NS-1.2 Control and abate undesirable sounds through the use of the land use compatibility criteria shown in Exhibit NS-1, Table NS-3, and the Municipal Code Section 16.20.125(B).

NS-1.5 Require the design and construction of commercial, industrial, office and mixed-use structures developments with noise attenuation methods to minimize excessive noise upon noise-sensitive land uses.

NS-1.9 Encourage commercial, industrial, office and mixed-use developments to locate loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noisier components away from noise-sensitive land uses.

NS-1.10 Limit the hours of construction activity in, and around, residential areas in order to reduce the intrusion of noise in the early morning and late evening hours and on weekends and holidays.

NS-1.11 Limit delivery hours for businesses with loading areas or docks fronting, siding, or bordering or gaining access on driveways adjacent to noise-sensitive areas.

NS-1.12 Implement nighttime and daytime on-site noise level limits to address noise generated by commercial and industrial uses where it affects abutting residential and other noise-sensitive land uses.

The State of California Land Use Compatibility Plan (Exhibit NS-1) in the City of Hesperia General Plan Noise Element lists land use categories and the acceptable and unacceptable levels of community noise exposure. The compatibility criteria shown in Table NS-1 (and Exhibit 3-1 of this report) provide the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The State of California Land Use Compatibility Plan describes categories of compatibility, but not specific noise standards. According to these categories of transportation-related noise compatibility, the Amargosa and Palmetto High-Cube Warehouse industrial land uses are considered *normally acceptable* with unmitigated exterior noise levels below 75 dBA CNEL and *conditionally* acceptable with noise levels between 70 and 80 dBA CNEL. For "conditionally acceptable" land use, "new construction or development should be undertaken only after a detailed analysis of noise reduction requirements are made" (11).

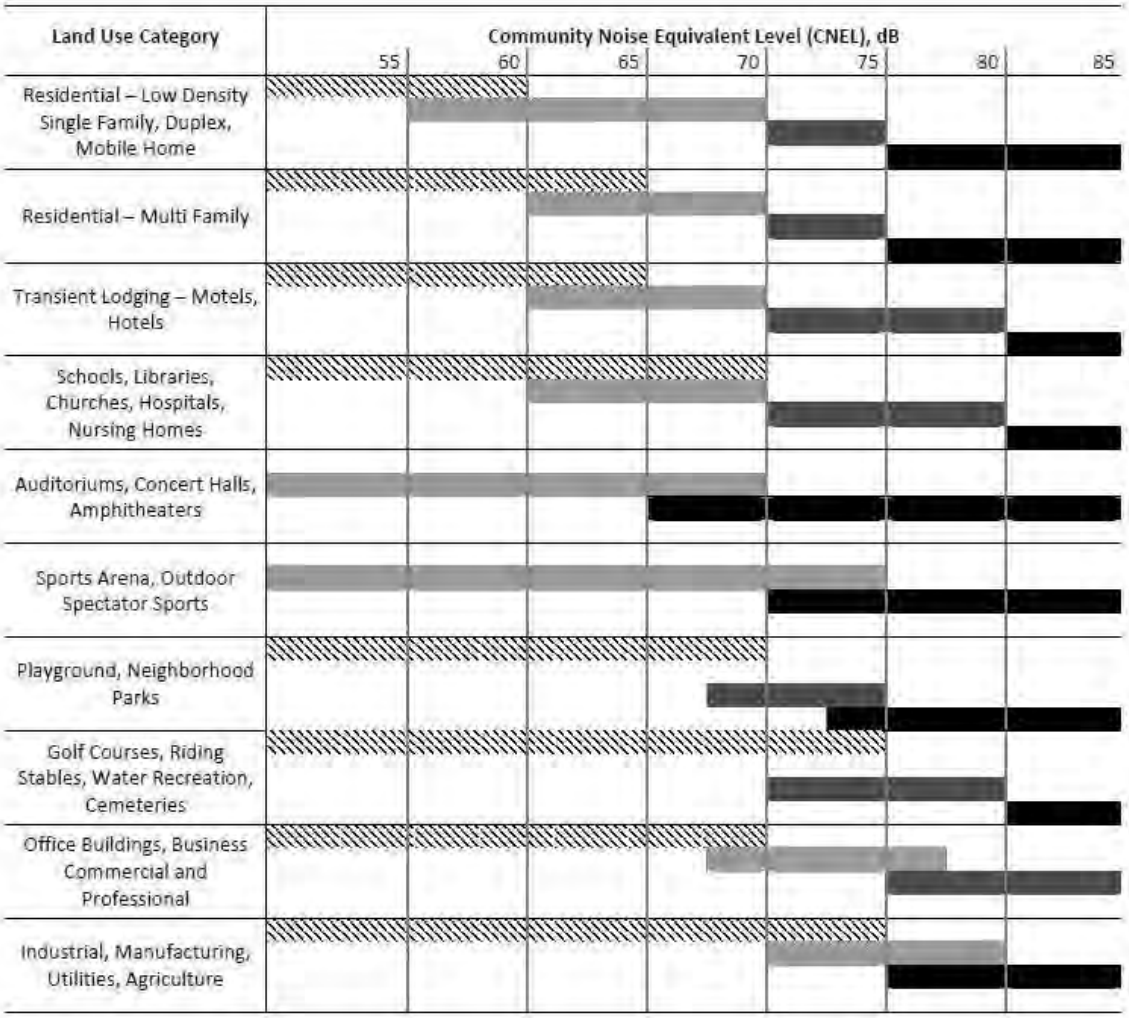
3.3 Operational Noise Standards

To analyze noise impacts originating from a designated fixed location or private property such as the Amargosa and Palmetto High-Cube Warehouse, stationary-source (operational) noise such as the expected loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements are typically evaluated against standards established under a jurisdiction's Municipal Code.

Section 16.20.125 of the City of Hesperia Municipal Code included in Appendix 3.1, establishes the noise level standards for stationary noise sources and establishes noise level limits for affected land uses. Since the Project land use will potentially impact a combination of non-noise-sensitive and noise-sensitive uses in the Project study area, this noise study relies on the exterior noise level standards for all land uses identified by the City of Hesperia Municipal Code.

For non-noise sensitive industrial uses, the maximum exterior noise level shall not exceed 70 dBA L_{eq} at any time, while the maximum exterior noise level at non-noise sensitive commercial uses shall not exceed 65 dBA L_{eq} at any time.

EXHIBIT 3-1: LAND USE NOISE COMPATIBILITY CRITERIA



Source: State of California General Plan Guidelines (2003)

For noise-sensitive residential properties, the maximum exterior noise level shall not exceed 60 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 50 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.). (12) In addition, except for the nighttime hours from 10:00 p.m. to 7:00 a.m.) the maximum permissible noise levels due to wind noise may be adjusted so that it is no greater than five dB(A) above the ambient noise level. The Municipal Code operational noise level standards are summarized in Table 3-1.

TABLE 3-1: OPERATIONAL NOISE STANDARDS

Receiving Land Use[1]	Time Period	Exterior Noise Level Standard (dBA L_{eq})[2]
A-1, A-2, R-1, R-3, and RR Zone Districts	Daytime (7:00 a.m. - 10:00 p.m.)	60
	Nighttime (10:00 p.m. - 7:00 a.m.)	55
C-1, C-2, C-3, C-4, C-R, AP, and P-I Zone Districts	Anytime	65
I-1 and I-2 Zone	Anytime	70

[1] City of Hesperia Municipal Code, Section 16.20.125 (Appendix 3.1).
[2] L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period.

3.4 CONSTRUCTION NOISE STANDARDS

The City of Hesperia Municipal Code, Section 16.20.125.E.3 exempts construction noise from its stationary-source noise level limits between seven a.m. and seven p.m. and at any time on Sundays and federal holidays. (12) In addition, neither the City of Hesperia General Plan or Municipal Code establish numeric maximum acceptable construction source noise(12) levels at potentially affected receivers for CEQA analysis purposes. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use (13 p. 179).

3.6 VIBRATION STANDARDS

The City of Hesperia Municipal Code, Section 16.20.130, identifies an operational vibration level threshold of 0.2 in/sec PPV which is used in this report to evaluate potential impacts due to on-site Project related operational vibration level activities at nearby receiver locations. (12) According to Section 16.20.130.C.2, temporary construction, maintenance, or demolition activities are considered exempt provided that construction vibration activity is limited the hours between seven a.m. and seven p.m. including Sundays and federal holidays.

4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the CEQA Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. (14) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. The *ambient noise level* represents the composite of noise from all sources near and far representing the normal or existing level of environmental noise at a given location. In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

Sensitive receivers are areas where humans are participating in activities that may be subject to the stress of significant interference from noise and often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. Other receivers include office and industrial buildings, which are not considered as sensitive as single-family homes, but are still protected by the City of Hesperia land use compatibility standards, as discussed below.

4.1.1 Noise Sensitive Receivers (Substantial Permanent Noise Level Increase)

The Federal Interagency Committee on Noise (FICON) (15) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}). In general,

the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

As previously stated, the approach used in this noise study recognizes that there is no single noise increase that renders a noise impact significant, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (14) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA barely perceptible noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance.

The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or readily perceptible, 3 dBA or barely perceptible, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (16 p. 2_48).

4.1.2 Non-Noise Sensitive Receivers (Substantial Permanent Noise Level Increase)

The City of Hesperia General Plan Noise Element, Exhibit NS-1, *Land Use Compatibility Criteria* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive land uses is 75 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered *conditionally acceptable* per the *Land Use Compatibility for Community Noise Exposure*. (17) To determine if Project-related traffic noise increases are significant at off-site non-noise-sensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 75 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the City of Hesperia General Plan Noise Element, Table N-1, *Land Use Compatibility for Community Noise Exposure normally acceptable* 70 dBA CNEL exterior noise level criteria.

4.1.3 Construction Noise (Substantial Temporary Noise Level Increase)

To control the noise-generating construction activities, the temporary noise level increases over the existing ambient conditions must be considered under CEQA Significance Threshold A. Although

noise ordinances vary across jurisdictions, many cities and counties in California, including Los Angeles, San Diego, and San Francisco, set construction noise limits between 75 and 80 dBA L_{eq} and typically restrict construction activities to the daytime hours. In contrast, everyday operational noise regulations are more stringent because they apply to continuous, long-term noise sources that can significantly impact the quality of life. As a result, many jurisdictions including the City of Hesperia establish daytime residential noise limits around 55 dBA L_{eq}. This suggests that 20 to 30 dBA increase over the daytime noise limit can be reasonably tolerated without significant adverse effects. In addition, increases of up to 20 dBA L_{eq} are permitted according to Section 16.20.125[B][2][e] of the City of Hesperia Municipal Code. This is also illustrated in the adoption of many CEQA documents statewide that use an 80 dBA L_{eq} limit for assessing construction impacts while using everyday noise level limits of local noise ordinances in assessing on-site operational impacts.

While this analysis relies on the 20 dBA L_{eq} *substantial* noise increase threshold, it is important to recognize that many jurisdictions within the State including the City of Los Angeles no longer maintain any daytime noise increase thresholds. The City of Los Angeles found the 10 dBA daytime construction noise increase thresholds previously employed in the City of Los Angeles to be overly conservative, especially in the context of impacts on public health that often results in significant impact determination, even for routine construction activities that are expected to occur in an urban environment. (18 p. 7) Based on these findings, the updated City of Los Angeles CEQA Thresholds Guide identifies a 5 dBA nighttime construction noise increase threshold but no longer maintains a numerical threshold above ambient noise levels for daytime construction activities. Therefore, if the Project-related construction noise levels generate a temporary noise level increase over the existing daytime ambient noise levels more than 20 dBA L_{eq} consistent with Section 16.20.125[B][2][e] of the City of Hesperia Municipal Code or 5 dBA L_{eq} over the existing nighttime ambient noise levels, then the Project construction noise increases will be considered a *significant* impact.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, vibration impacts originating from the construction of the Amargosa and Palmetto High-Cube Warehouse, vibration-generating activities are appropriately evaluated using the City of Hesperia threshold to assess potential temporary construction-related impacts at nearby receiver locations. The City of Hesperia Municipal Code identifies an operational vibration level threshold of 0.2 in/sec PPV.

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest airport is Hesperia Airport located approximately 5.2 miles southeast. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than*

significant, and no further noise analysis is conducted in relation to Appendix G to the CEQA Guidelines, Noise Threshold C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic	Noise-Sensitive	If ambient is < 60 dBA CNEL[1]	≥ 5 dBA CNEL Project increase	
		If ambient is 60 - 65 dBA CNEL[1]	≥ 3 dBA CNEL Project increase	
		If ambient is > 65 dBA CNEL[1]	≥ 1.5 dBA CNEL Project increase	
Off-Site Traffic	Non-Noise-Sensitive	If ambient is > 75 dBA CNEL[2]	≥ 3 dBA CNEL Project increase	
Operational	Noise-Sensitive	Exterior Noise Level Standards	See Table 3-1	
		If ambient is < 60 dBA L_{eq}[1]	≥ 5 dBA L_{eq} Project increase	
		If ambient is 60 - 65 dBA L_{eq}[1]	≥ 3 dBA L_{eq} Project increase	
		If ambient is > 65 dBA L_{eq}[1]	≥ 1.5 dBA L_{eq} Project increase	
Construction	Noise-Sensitive	Exterior Noise Level Threshold[3]	80 dBA L_{eq}	70 dBA L_{eq}
		Exterior Noise Level Increase	20 dBA L_{eq}[4]	5 dBA L_{eq}[5]
		Vibration Level Threshold[6]	0.2 PPV (in/sec)	

[1] FICON, 1992.
[2] City of Hesperia General Plan Noise Element Exhibit NS-1 Land Use Compatibility Criteria.
[3] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual
[4] Reasonable daytime increase that can be tolerated without significant adverse effects.
[5] City of Los Angeles Department of City Planning, Construction Noise and Vibration Updates to Thresholds and Methodology.
[6] City of Hesperia Municipal Code, Section 16.20.130[A] (Appendix 3.1).
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at three locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-1 provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, long-term noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, June 21, 2022. Appendix 5.1 includes study area photos.

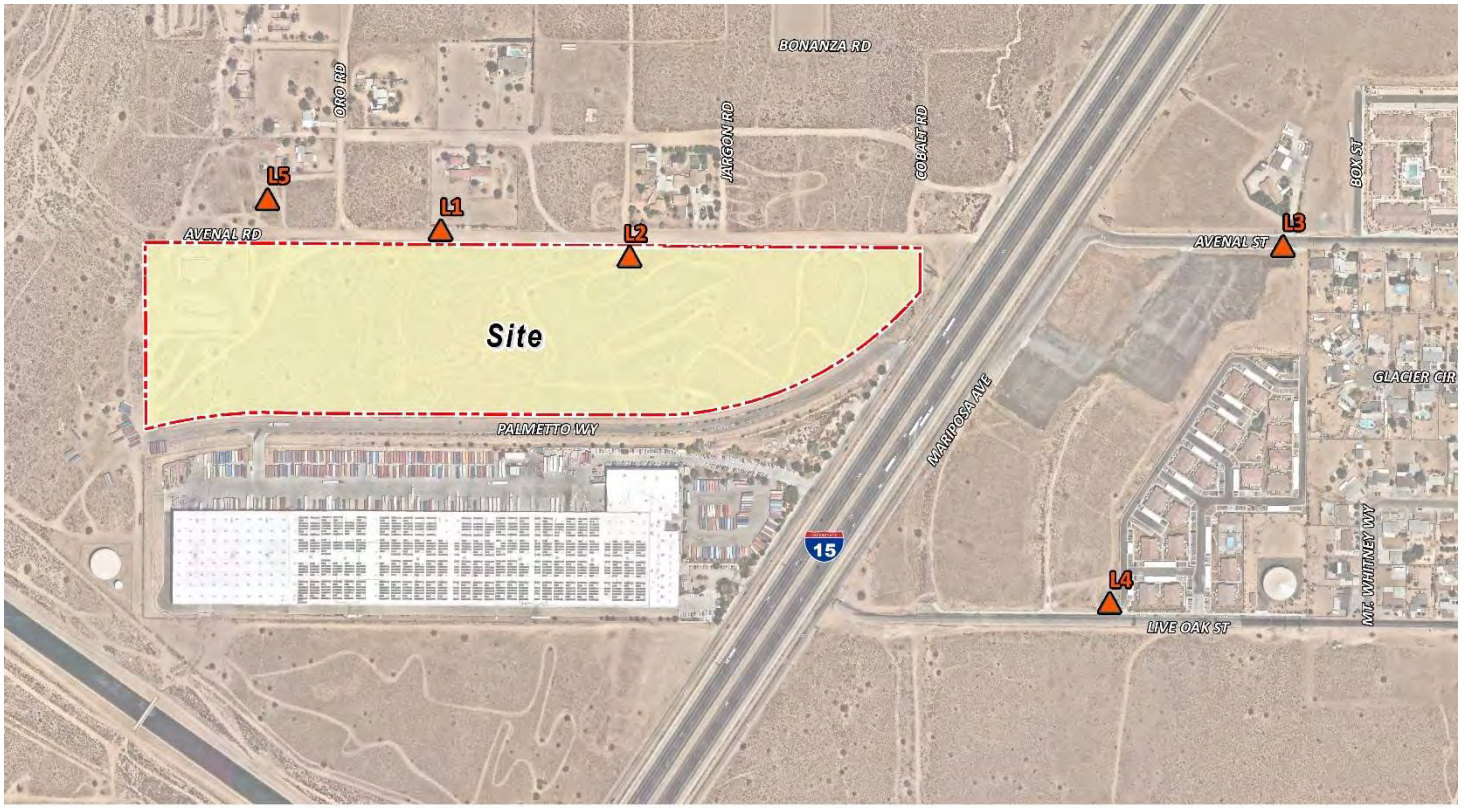
5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (19)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing equivalent hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines, which indicate that sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (2) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (8) Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts.

EXHIBIT 5-1: NOISE MEASUREMENT LOCATIONS



Collecting noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise increase due to the Project's contribution to the ambient noise levels. This approach is necessary to calculate the temporary or permanent increase in ambient noise levels as required by the CEQA Guidelines Environmental Checklist.

5.3 Noise Measurement Results

The noise measurements presented below focus on the equivalent or the hourly energy average sound levels (Leq) to describe the existing ambient conditions. Table 5-1 provides the (energy average) noise levels used to describe the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The daytime and nighttime equivalent noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number.

Table 5-1: Ambient Noise Level Measurements

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located north of the Project Site near the existing noise sensitive residence at 13030 Avenal Street.	61.0	58.2
L2	Located south of the existing noise sensitive residence at 13164 Avenal Road with the Project Site.	55.6	55.2
L3	Located east of the Project site near the existing noise sensitive residence at 10445 Avenal Street.	58.6	58.4
L4	Located southeast of the Project site near the existing noise sensitive residence at 10122 Mt. Whitney Way.	62.7	61.7
L5	Located south of the existing noise sensitive residence at 10376 Wellington Road.	52.3	51.5

[1] See Exhibit 5-1 for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the equivalent noise levels used to describe the daytime and nighttime ambient conditions for each of the measurements. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L1, L2, L5, L8, L25, L50, L90, L95, and L99 percentile noise levels observed during the daytime and nighttime periods.

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6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with the City of Hesperia General Plan Noise Element, (Exhibit NS-1), *Land Use Noise Compatibility Criteria*, all transportation related noise levels for the outdoor activity areas are presented in terms of the 24-hour CNEL's. Unlike a simple arithmetic average noise level, CNEL represents the logarithmic summation of the equivalent hourly noise levels with evening and nighttime noise penalties recognizing that noise may have different impacts on people depending on when it occurs.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (20) This methodology is commonly used to describe the off-site traffic noise levels throughout southern California. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL) by vehicle type. REMEL represents the maximum sound level (L_{max}) of individual vehicle "pass by" events by vehicle type when measured at a "reference distance" of 50 feet from the center of the travel lane.

In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (16) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (21)

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the seven off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Hesperia General Plan Circulation Element, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis*, prepared by the Ganddini Group, Inc.. (22)

- Existing Conditions
- Opening Year (2027) Without Project Conditions (OYC).
- Opening Year (2027) With Project Conditions (OYCP).

- General Plan Buildout (2040) Without Project Conditions (HY).
- General Plan Buildout (2040) With Project Conditions (HYP).

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with Project ADT traffic volumes from the Project traffic analysis. Consistent with the Project traffic study.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Receiving Land Use[1]	Classification[2]	Distance from Centerline to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	Secondary	40'	45
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	Arterial	50'	50
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	Arterial	50'	50
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	Arterial	50'	50
5	Main St.	w/o Key Pointe Dr.	Sensitive	Major Arterial	60'	55
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	Major Arterial	60'	55
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	Major Arterial	60'	55

[1] Based on a review of existing aerial imagery. Noise-sensitive uses are limited to existing residential land uses.
[2] City of Hesperia General Plan, Circulation Element, Exhibit CI-1
3 Distance to receiving land use is based upon the right-of-way distances.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes (Actual Vehicles)[1]				
			Existing Without Project	OY (2027) Without Project	OYP (2027) With Project	General Plan Buildout (2040) Without Project	General Plan Buildout (2040) With Project
1	Key Pointe Dr.	s/o Amargosa Rd.	460	4,740	5,432	4,700	5,392
2	Amargosa Rd.	n/o Palmetto Wy.	9,140	10,550	10,748	13,110	13,308
3	Amargosa Rd.	w/o Key Pointe Dr.	6,940	12,070	12,086	11,280	11,296
4	Amargosa Rd.	e/o Key Pointe Dr.	6,740	7,590	8,298	7,360	8,068
5	Main St.	w/o Key Pointe Dr.	32,330	44,250	44,274	41,730	41,754
6	Main St.	e/o Key Pointe Dr.	23,250	31,150	31,818	27,250	27,918
7	Main St.	e/o I-15 NB Ramps	33,620	42,950	43,187	41,990	42,227

[1] Ganddini Group, Inc., Amargosa And Palmetto High-Cube Warehouse Revised Traffic Impact Analysis.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

The *Amargosa and Palmetto High-Cube Warehouse Traffic Analysis* did not publish existing counts which show the vehicle splits on any of the roadway segments analyzed therefore this noise study used publicly available vehicle count data published in the Hesperia Industrial Center Traffic Analysis, Urban Crossroads, Inc. taken at the Phelan Road and Main Street intersection in the City of Hesperia. The vehicle splits were taken on a roadway that is evaluated in this report and are representative of the existing conditions within the project study area. Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Amargosa and Palmetto High-Cube Warehouse Traffic Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-6 show the vehicle mixes used for the with Project traffic scenarios.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Time of Day	Vehicle Mix[1]			Time of Day Split[1]
	Autos[2]	Medium Trucks[3]	Heavy Trucks[4]	
Daytime	72.80%	1.48%	3.74%	78.02%
Evening	12.12%	0.09%	0.12%	12.32%
Nighttime	9.02%	0.18%	0.47%	9.66%
Daily	93.94%	1.74%	4.32%	100.00%

[1] Based on an existing vehicle count taken at US Highway 395 and Phelan Road/Main Street (Hesperia Industrial Center Traffic Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.
[2] All vehicles with two axles and four wheels designed primarily for transportation of nine or fewer passengers (automobiles) or transportation of cargo (light trucks).
[3] All vehicles with two axles and six wheels designed for transportation of cargo.
[4] All vehicles with three or more axles designed for the transportation of cargo.

Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.

TABLE 6-4: OPENING YEAR (2027) WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Key Pointe Dr.	s/o Amargosa Rd.	92.59%	1.88%	5.53%	100.00%
2	Amargosa Rd.	n/o Palmetto Wy.	94.05%	1.71%	4.24%	100.00%
3	Amargosa Rd.	w/o Key Pointe Dr.	93.95%	1.74%	4.32%	100.00%
4	Amargosa Rd.	e/o Key Pointe Dr.	93.07%	1.83%	5.11%	100.00%
5	Main St.	w/o Key Pointe Dr.	93.94%	1.74%	4.32%	100.00%
6	Main St.	e/o Key Pointe Dr.	93.70%	1.76%	4.53%	100.00%
7	Main St.	e/o I-15 NB Ramps	93.97%	1.73%	4.30%	100.00%

[1] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-5: GENERAL PLAN BUILDOUT (2040) WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Key Pointe Dr.	s/o Amargosa Rd.	92.58%	1.88%	5.54%	100.00%
2	Amargosa Rd.	n/o Palmetto Wy.	94.03%	1.71%	4.26%	100.00%
3	Amargosa Rd.	w/o Key Pointe Dr.	93.95%	1.74%	4.32%	100.00%
4	Amargosa Rd.	e/o Key Pointe Dr.	93.04%	1.83%	5.13%	100.00%
5	Main St.	w/o Key Pointe Dr.	93.94%	1.74%	4.32%	100.00%
6	Main St.	e/o Key Pointe Dr.	93.67%	1.77%	4.56%	100.00%
7	Main St.	e/o I-15 NB Ramps	93.97%	1.73%	4.30%	100.00%

[1] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis* prepared by the Ganddini Group, Inc. (22) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 through 7-6 present a summary of the exterior dBA CNEL traffic noise levels for each traffic condition. Appendix 7.1 includes a summary of the dBA CNEL traffic noise level contour worksheets for each of the traffic conditions.

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	57.5	RW	RW	RW
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	70.5	54	116	251
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	69.3	45	97	209
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.2	44	95	205
5	Main St.	w/o Key Pointe Dr.	Sensitive	76.6	165	356	767
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	75.2	133	286	615
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	76.8	170	365	787

[1] Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 OY (2027) Project Traffic Noise Level Increases

Table 7-3 presents the OY (2027) without Project conditions CNEL noise levels. The OY (2027) without Project exterior noise levels are expected to range from 67.7 to 78.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows that the OYP (2027) with Project conditions will range from 68.9 to 78.0 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases will range from less than 0.1 to 1.2 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to Project-related traffic noise levels.

Table 7-2: OY (2027) Without Project Contours

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	67.7	RW	60	130
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	71.1	59	128	276
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.7	65	140	302
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.7	48	103	222
5	Main St.	w/o Key Pointe Dr.	Sensitive	78.0	204	439	945
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.4	161	347	748
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	77.8	200	430	926

1 Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OY (2027) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	68.9	34	73	157
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	71.2	60	129	277
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.7	65	140	302
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	70.5	54	116	250
5	Main St.	w/o Key Pointe Dr.	Sensitive	78.0	204	439	945
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.6	166	358	771
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	77.8	200	431	928

1 Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.3 GENERAL PLAN BUILDOUT (2040) PROJECT TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the General Plan Buildout (2040) without Project conditions CNEL noise levels. The General Plan Buildout (2040) without Project exterior noise levels are expected to range from 67.6 to 77.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows that the General Plan Buildout (2040) with Project conditions will range from 68.9 to 77.7 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases will range from less than 0.1 to 1.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to Project-related traffic noise levels.

TABLE 7-4: GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	67.6	RW	60	129
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	72.1	69	148	319
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.4	62	134	289
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.6	47	101	217
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.7	196	422	909
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	75.9	147	317	684
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	77.7	197	424	912

1 Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-5: GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	68.9	34	72	156
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	72.1	69	149	320
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.4	62	134	289
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	70.4	53	114	246
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.7	196	422	909
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.1	153	329	708
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	77.7	197	424	914

1 Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-6: OY (2027) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	67.7	68.9	1.2	1.5	No
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	71.1	71.2	0.0	1.5	No
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.7	71.7	0.0	1.5	No
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.7	70.5	0.8	n/a	No
5	Main St.	w/o Key Pointe Dr.	Sensitive	78.0	78.0	0.0	1.5	No
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.4	76.6	0.2	3.0	No
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	77.8	77.8	0.0	3.0	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

TABLE 7-7: GENERAL PLAN BUILDOUT (2040) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]			Incremental Noise Level Increase Threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Key Pointe Dr.	s/o Amargosa Rd.	Sensitive	67.6	68.9	1.3	1.5	No
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	72.1	72.1	0.0	1.5	No
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.4	71.4	0.0	1.5	No
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.6	70.4	0.8	n/a	No
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.7	77.7	0.0	1.5	No
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	75.9	76.1	0.2	3.0	No
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	77.7	77.7	0.0	3.0	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following receiver locations, as shown on Exhibit 8-1, were identified as representative locations for analysis. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2, Noise Measurement Locations. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, five receiver locations in the vicinity of the Project site were identified. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the Project boundary to each receiver location.

R1: Location R1 represents the existing noise sensitive residence at 13030 Avenal Street, approximately 71 feet north of the Project site. Receiver R1 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

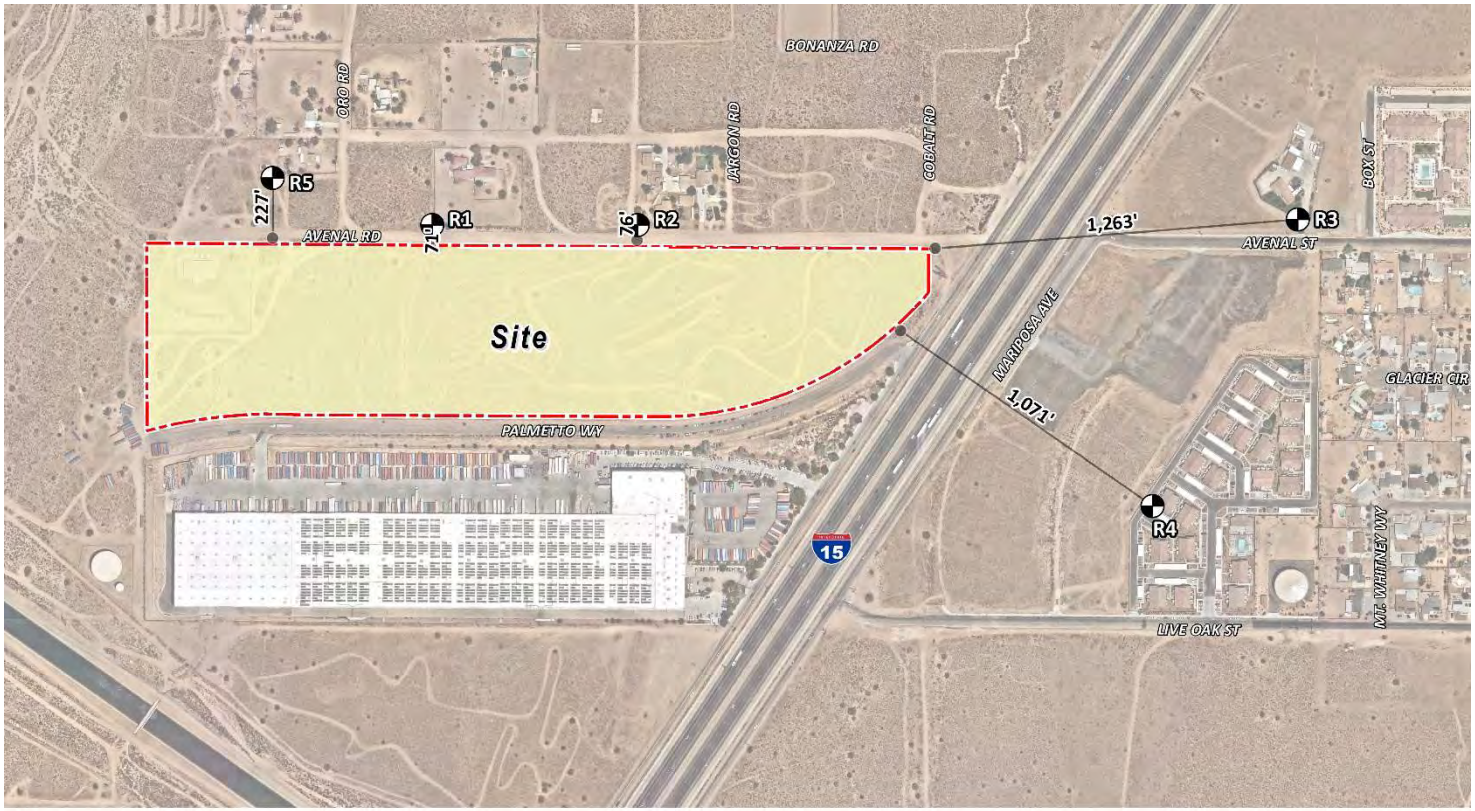
R2: Location R2 represents the existing noise sensitive residence at 13164 Avenal Road, approximately 76 feet north of the Project site. Receiver R2 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing noise sensitive residence at 10445 Avenal Street, approximately 1,263 feet east of the Project site. Receiver R3 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the existing noise sensitive residence at 10122 Mt. Whitney Way, approximately 1,071 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the residential building façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.

R5: Location R5 represents the existing noise sensitive residence at 10376 Wellington Road, approximately 227 feet north of the Project site Receiver R5 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

EXHIBIT 8-1: RECEIVER LOCATIONS



9 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential operational noise impacts at the nearby receiver locations, identified in Section 8, Receiver Locations, resulting from the operation of loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. Exhibit 10-1 identifies the noise source locations used to assess the equivalent L_{eq} operational noise levels

9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. Consistent with similar warehouse and industrial uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements.

9.2 REFERENCE NOISE LEVELS

To estimate the operational noise impacts, reference noise level measurements were collected from similar types of sources to represent the noise levels expected with the development of the Project. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment. The reference Project operational sound power levels are summarized in Table 9-1.

9.2.1 Measurement Procedures

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (19)

EXHIBIT 10-1: OPERATIONAL NOISE SOURCE LOCATIONS

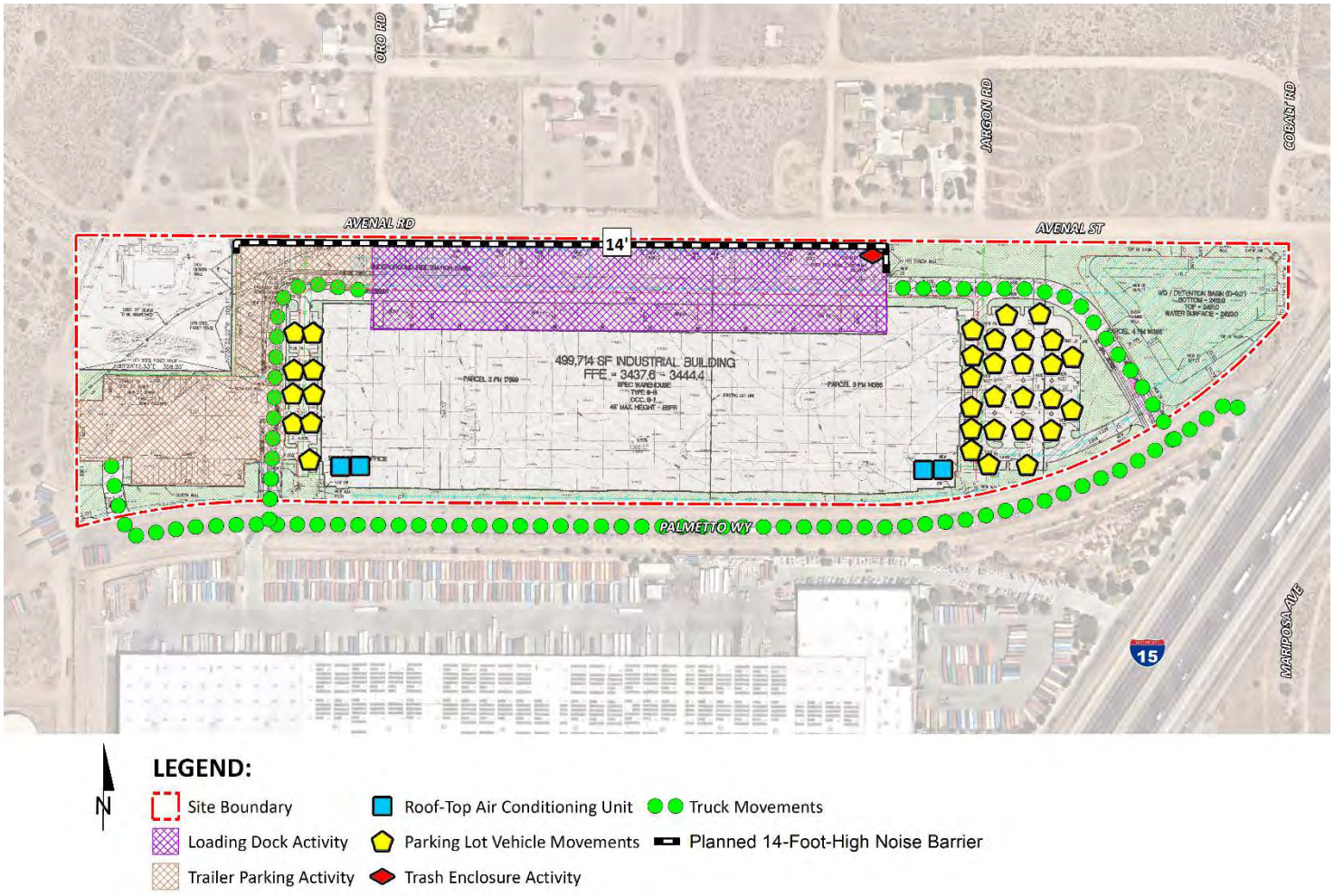


TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Reference Noise Source	Noise Source Height (Feet)	Min./ Hour[1]		Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)[2]
		Day	Night		
Loading Dock Activity	8′	60	60	65.7	111.5
Trailer Parking Activity	8′	60	60	62.8	103.4
Roof-Top Air Conditioning Units	5′	39	28	57.2	88.9
Trash Enclosure Activity	5′	10	10	57.3	89.0
Parking Lot Vehicle Movements	5′	60	60	52.6	81.1
Truck Movements	8′	60	60	59.8	93.2

[1] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. – 10:00 p.m.; "Nighttime" = 10:00 p.m. – 7:00 a.m.

[2] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

9.2.2 Loading Dock Activity

The reference loading dock activities are intended to describe the typical outdoor operational noise activities associated with the Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities. Since the noise levels generated by cold storage loading dock activity can be slightly higher due to the use of refrigerated trucks or reefers.

The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

9.2.3 Trailer Parking Activity

To evaluate the noise levels associated with truck idling, backup alarms, trailer movements and storage activities, Urban Crossroads collected a reference noise level measurement at an existing parcel hub facility to describe the potential operational noise levels associated with Project operational activities. The measured reference noise level at 50 feet from activity was measured at 62.8 dBA L_{eq}.

The reference noise level measurement includes a semi-truck with trailer pass-by event, background switcher cab trailer towing, drop-off, idling, and backup alarm events. Noise associated with trailer storage activity is expected to operate for the entire hour (60 minutes).

9.2.4 Roof-Top Air Conditioning Units

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA L_{eq}. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project building.

9.2.5 Trash Enclosure Activity

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building. Typical trash enclosure activities are estimated to occur for 10 minutes per hour.

9.2.6 Parking Lot Vehicle Movements

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of an Amazon warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA L_{eq}. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due cars pulling in and out of parking spaces in combination with car doors opening and closing.

9.2.7 Truck Movements

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represents multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for trucks entering and existing the Project driveways and maneuvering in and out of the outdoor loading dock activity area.

9.3 CadnaA Noise Prediction Model

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels. Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source.

Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (Lw) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (Lw) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment. The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise dBA L_{eq} model inputs used to estimate the Project operational noise levels presented in this section.

9.4 Project Operational Noise Levels

Using the reference noise levels to represent the Project operations that include loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-2 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 31.2 to 39.7 dBA L_{eq}.

Table 9-3 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the existing off-site receiver locations are expected to range from 30.1 to 38.7 dBA L_{eq}. The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1. Appendix 9.1 includes the detailed noise model inputs.

TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA L_{eq})				
	R1	R2	R3	R4	R5
Loading Dock Activity	11.0	10.1	0.0	0.0	4.9
Trailer Parking Activity	0.0	0.0	0.0	0.0	1.3
Roof-Top Air Conditioning Units	26.8	26.6	21.4	24.0	27.1
Trash Enclosure Activity	15.3	24.9	3.1	4.6	10.7
Parking Lot Vehicle Movements	17.8	32.7	26.4	28.8	27.7
Truck Movements	30.4	38.2	28.7	31.4	33.7
Total (All Noise Sources)	32.3	39.7	31.2	33.8	35.4

[1] See Exhibit 9-1 for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

TABLE 9-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA L_{eq})				
	R1	R2	R3	R4	R5
Loading Dock Activity	10.0	9.1	0.0	0.0	4.0
Trailer Parking Activity	0.0	0.0	0.0	0.0	0.4
Roof-Top Air Conditioning Units	24.3	24.2	19.0	21.6	24.7
Trash Enclosure Activity	14.4	24.0	2.2	3.6	9.7
Parking Lot Vehicle Movements	16.8	31.8	25.4	27.8	26.7
Truck Movements	29.4	37.3	27.7	30.4	32.7
Total (All Noise Sources)	30.9	38.7	30.1	32.7	34.2

[1] See Exhibit 9-1 for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

9.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the unmitigated Project-only operational noise levels are evaluated against exterior noise level thresholds based on the exterior noise level standards at nearby receiver locations. Table 9-4 shows that the mitigated operational noise levels associated with the Project will not exceed the daytime and nighttime exterior noise level standards at the existing nearby noise-sensitive receiver locations. Therefore, the mitigated operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

9.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations that may be potentially impacted by Project operational noise sources.

TABLE 9-4: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Project Operational Noise Levels (dBA L_{eq})[2]		Noise Level Standards (dBA L_{eq})[3]		Noise Level Standards Exceeded?[4]	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	32.3	30.9	60.0	55.0	No	No
R2	39.7	38.7	60.0	55.0	No	No
R3	31.2	30.1	60.0	55.0	No	No
R4	33.8	32.7	60.0	55.0	No	No
R5	35.4	34.2	60.0	55.0	No	No

[1] See Exhibit 8-1 for the receiver locations.
[2] Proposed Project unmitigated operational noise levels as shown in Tables 9-2 and 9-3.
[3] Exterior noise level standards, as shown in Table 4-1.
4 [D]o the estimated Project operational noise source activities exceed the noise level standards?
"Daytime" = 7:00 a.m. – 10:00 p.m.; "Nighttime" = 10:00 p.m. – 7:00 a.m.

Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \ldots 10^{SPLn/10}]$$

where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases in the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented in Tables 9-5 and 9-6, respectively. As indicated in Table 9-5, the Project will generate daytime operational noise increases ranging from less than 0.1 to 0.1 dBA L_{eq} at the nearest receiver locations. Table 9-6 shows that the Project will generate nighttime operational noise level increases ranging from less than 0.1 to 0.1 dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases would not exceed the operational noise level increase significance criteria presented in Table 4-1. Therefore, Project-related operational noise level increases at the sensitive receiver locations will be *less than significant.*

TABLE 9-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	32.3	L1	61.0	61.0	0.0	5.0	No
R2	39.7	L2	55.6	55.7	0.1	5.0	No
R3	31.2	L3	58.6	58.6	0.0	5.0	No
R4	33.8	L4	62.7	62.7	0.0	5.0	No
R5	35.4	L5	52.3	52.4	0.1	5.0	No

[1] See Exhibit 8-1 for the receiver locations.
[2] Total Project daytime operational noise levels as shown in Table 9-2.
[3] Reference noise level measurement locations as shown in Exhibit 5-1.
[4] Observed daytime ambient noise levels as shown in Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the Project activities.
[7] Significance increase criteria as shown in Table 4-1.

TABLE 9-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	30.9	L1	58.2	58.2	0.0	5.0	No
R2	38.7	L2	55.2	55.3	0.1	5.0	No
R3	30.1	L3	58.4	58.4	0.0	5.0	No
R4	32.7	L4	61.7	61.7	0.0	5.0	No
R5	34.2	L5	51.5	51.6	0.1	5.0	No

[1] See Exhibit 8-1 for the receiver locations.
[2] Total Project nighttime operational noise levels as shown in Table 9-3.
[3] Reference noise level measurement locations as shown in Exhibit 5-1.
[4] Observed nighttime ambient noise levels as shown in Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the Project activities.
[7] Significance increase criteria as shown in Table 4-1.

10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-1 shows the on-site construction noise source activity in relation to the nearest sensitive receiver locations previously described in Section 8 Receiver Locations. According to the City of Hesperia Section 16.20.125.E.3 exempts construction noise from its stationary-source noise level limits between seven a.m. and seven p.m. and at any time on Sundays and federal holidays (12).

10.1 CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (23) The RCNM equipment database provides a comprehensive list of the noise-generating characteristics of specific types of construction equipment. In addition, the database provides an acoustic usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. According to the EPA, FTA, and FHWA, the overall construction noise level is governed primarily by the noisiest pieces of equipment. The quieter pieces do not affect the overall level, but they do reduce the magnitude of the fluctuations in the noise level. Therefore, a rough estimate of the noise level needs only include the noisiest pieces of equipment expected at the site. (24) (8) (25) Consistent with FHWA and FTA guidance for detailed construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction activities expected for each stage, assuming all equipment operates simultaneously. In addition, the analysis conservatively assumes that multiple construction crews could be operating the loudest equipment types concurrently within the construction area. This assumption represents a worst-case operating condition and is intended to conservatively estimate construction noise levels by accounting for the potential for overlapping activities during peak construction periods.

EXHIBIT 10-1: CONSTRUCTION NOISE SOURCE LOCATIONS

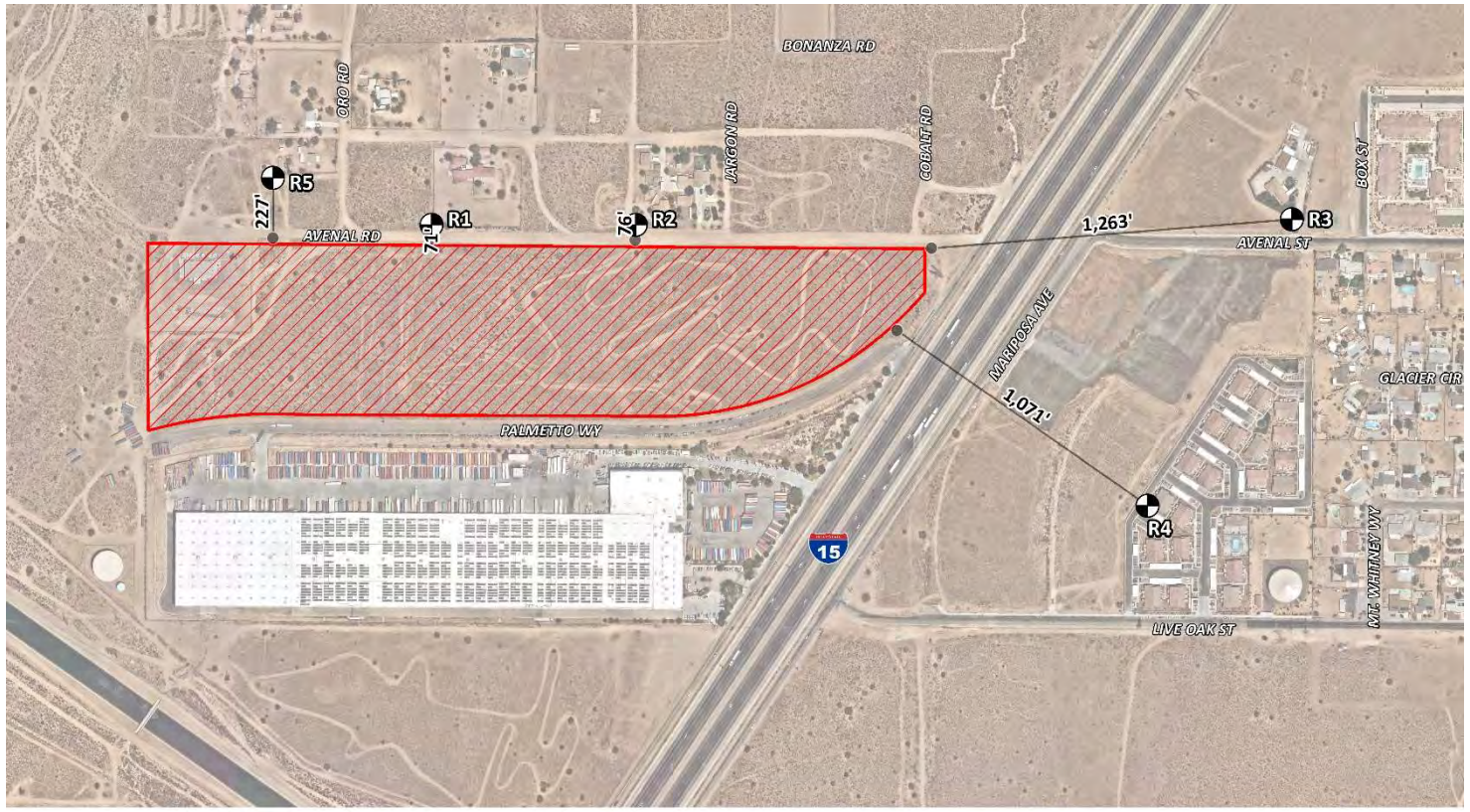


TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Composite Reference Noise Level (dBA L_{eq})[2]	Reference Power Level (dBA L_w)[3]
Site Preparation	Tractor	80	84.0	115.6
	Backhoe	74		
	Grader	81		
Grading	Scraper	80	83.3	114.9
	Excavator	77		
	Dozer	78		
Building Construction	Crane	73	81.1	112.8
	Tractor	80		
	Welder/Torch	70		
Paving	Paver	74	77.8	109.5
	Dump Truck	72		
	Roller	73		
Architectural Coating	Man Lift	68	79.8	111.4
	Compressor (air)	74		
	Generator	78		

[1] FHWA Road Construction Noise Model.
[2] Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings.

10.3 CONSTRUCTION NOISE ANALYSIS

Construction projects involve various stages, and activities frequently shift from one location to another. For example, during site preparation and grading, noise-generating activities may concentrate in an area for a short period to remove an obstruction, while the majority of the grading involves the equipment moving back and forth in a predictable pattern throughout the site; building construction and foundation work generally concentrate near the building footprint, while paving generally involves a predictable pattern of movement throughout the site. Therefore, construction activities are best evaluated as multiple moving point sources within the construction area since the speed and power of the equipment vary, and the equipment constantly changes position in terms of its distance and direction relative to the receivers. (8) (26) Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts by phase at the nearby sensitive receiver locations were completed. To account for the dynamic nature of construction activities, the CadnaA construction noise analysis evaluates the noise source activities as multiple moving point sources, or construction crews, within the limits of construction. Construction crews are represented by in Table 10-1 as three separate pieces of equipment. Equipment used in a noise analysis may differ from the list used in air quality since the noise model focuses on the loudest pieces of equipment or activity, while air quality models focus on the highest-emitting engines. An example is the use of backhoes in demolition, where an

air quality model list a backhoe, a noise model would use a backhoe-ram, which is a backhoe with an impact hammer mounted on it. Construction impacts are based on the loudest activity and the highest noise level calculated at each receiver location. As shown in Table 10-2, the construction noise levels are expected to range from 52.7 to 67.3 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	67.3	66.6	64.4	61.2	63.1	67.3
R2	67.1	66.4	64.2	61.0	62.9	67.1
R3	52.7	52.0	49.8	46.6	48.5	52.7
R4	54.7	54.0	51.8	48.6	50.5	54.7
R5	63.5	62.8	60.6	57.4	59.3	63.5

[1] Construction noise source and receiver locations are shown in Exhibit 10-1.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.4 PROJECT SITE CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at the nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities, as shown in Table 10-3. Therefore, the noise impacts due to Project construction noise are considered less than significant at all receiver locations.

TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	67.3	80	No
R2	67.1	80	No
R3	52.7	80	No
R4	54.7	80	No
R5	63.5	80	No

[1] Construction noise source and receiver locations are shown in Exhibit 10-1.
[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown in Table 10-2.
[3] Construction noise level thresholds as shown in Table 4-1.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.5 Temporary Construction Noise Level Increases

To describe the temporary Project construction noise level contributions to the existing ambient noise environment, the Project construction noise levels were combined with the existing ambient noise level measurements at the nearest off-site receiver locations. The difference between the combined Project-construction and ambient noise levels is used to describe the construction noise level contributions. Temporary noise level increases that would be experienced at sensitive receiver locations when the Project construction-source noise is added to the ambient daytime conditions are presented in Table 10-4. A temporary noise level increase of 20 dBA is considered a significant impact based on the substantial noise level increase criteria, which is used to assess the Project construction noise level increases.

As indicated in Table 10-4, the Project will contribute to construction noise increases ranging from 0.9 to 3.2 dBA L_{eq} during the daytime hours at the nearest receiver locations. The unmitigated construction noise analysis shows that the nearest receiver locations will not exceed the 20 dBA L_{eq} substantial noise level increase significance threshold during Project construction activities. The temporary construction noise level increase analysis shows that the noise impacts due to Project construction noise are considered *less than significant*.

Table 10-4: Daytime Construction Noise Level Increases

Receiver Location[1]	Typical Project Construction Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	67.3	L1	61.0	68.2	7.2	20	No
R2	67.1	L2	55.6	67.4	11.8	20	No
R3	52.7	L3	58.6	59.6	1.0	20	No
R4	54.7	L4	62.7	63.3	0.6	20	No
R5	63.5	L5	52.3	63.8	11.5	20	No

[1] Construction noise source and receiver locations are shown in Exhibit 10-1.
[2] Typical Project daytime construction noise levels as shown in Table 10-3.
[3] Reference noise level measurement locations as shown in Exhibit 5-1.
[4] Observed daytime ambient noise levels as shown in Table 5-1.
[5] Represents the combined ambient conditions plus the Project construction activities.
[6] The noise level increase expected with the addition of the Project construction activities.
[7] Caltrans Traffic Noise Analysis Protocol.

10.6 Nighttime Concrete Pour Noise Analysis

It is our understanding that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area as shown on Exhibit 10-B. Since the nighttime concrete pours will take place outside the permitted City of Hesperia Municipal Code, Section 16.20.125.E.3 hours of *7:00 a.m. to 7:00 p.m. on any day and at any time on Sundays and federal holidays*. The Project Applicant will be required to obtain authorization for nighttime work

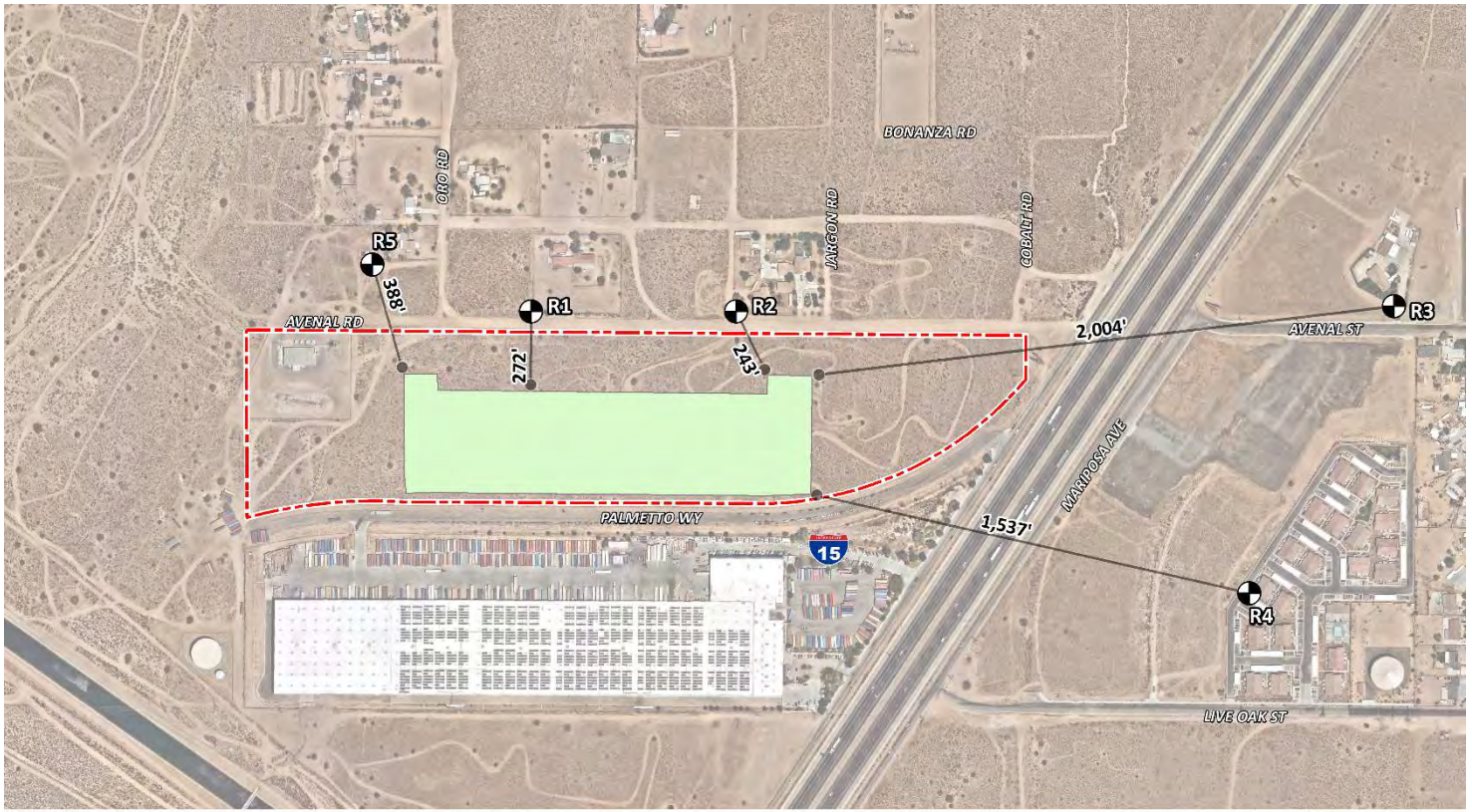
from the City of Hesperia. Any nighttime construction noise activities shall satisfy the noise limits outlined in Table 3-1.

10.6.1 Nighttime Concrete Pour Reference Noise Level Measurements

To estimate the noise levels due to nighttime concrete pour activities, sample reference noise level measurements were taken during a nighttime concrete pour at a construction site. Urban Crossroads, Inc. collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. at 27334 San Bernardino Avenue in the City of Redlands. The reference noise levels describe the expected concrete pour noise sources that may include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling.

To describe the nighttime concrete pour noise levels associated with the construction of the Amargosa and Palmetto High-Cube Warehouse, this analysis relies on reference sound power level of 100.3 dBA L_w. While the Project noise levels will depend on the actual duration of activities and specific equipment fleet in use at the time of construction, the reference sound power level of 100.3 dBA L_w is used to describe the expected Project nighttime concrete pour noise activities.

EXHIBIT 10-2: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS



10.6.2 Nighttime Concrete Pour Noise Level Compliance

As shown in Table 10-5, the noise levels associated with the nighttime concrete pour activities are estimated to range from 29.5 to 43.6 dBA L_{eq} and will satisfy the City of Hesperia nighttime stationary-source exterior hourly average L_{eq} residential noise level threshold at all the receiver locations. Based on the results of this analysis, all nearest noise receiver locations will experience *less than significant* impacts due to the Project related nighttime concrete pour activities. Appendix 10.2 includes the CadnaA nighttime concrete pour noise model inputs.

TABLE 10-5: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

Receiver Location[1]	Use	Construction Noise Levels (dBA L_{eq})		
		Paving Construction[2]	Nighttime Threshold[3]	Threshold Exceeded?[4]
R1	Residence	43.6	55	No
R2	Residence	43.3	55	No
R3	Residence	29.5	55	No
R4	Residence	31.5	55	No
R5	Residence	39.5	55	No

[1] Noise receiver locations are shown on Exhibit 10-2.
[2] Paving construction noise level calculations based on distance from the construction noise source activity to nearby receiver locations.
[3] Exterior nighttime noise level standards as shown on Table 3-1.
[4] Do the estimated Project construction noise levels exceed the nighttime construction noise level threshold?

10.7 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized in Table 10-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by Caltrans. To describe the vibration impacts Caltrans provides the following equation: $PPV\ (in/sec)_{equip} = PPV\ (in/sec)_{ref} \times (25/D)^{1.1}$

TABLE 10-6: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Using the vibration source level of construction equipment provided in Table 10-6 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-7 presents the expected project-related vibration levels at the nearby receiver locations. At distances ranging from 71 to 1,263 feet from Project construction activities, construction vibration velocity levels are estimated to range from approximately less than 0.01 to 0.07 PPV (in/sec). Based on the maximum acceptable continuous vibration threshold of 0.20 PPV (in/sec) the typical Project construction vibration levels will not exceed the vibration thresholds at any nearby sensitive receivers. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

TABLE 10-7: PROJECT CONSTRUCTION VIBRATION LEVELS – UNMITIGATED

Location[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]						Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jack-hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	71'	0.00	0.01	0.02	0.03	0.07	0.07	0.20	No
R2	76'	0.00	0.01	0.02	0.03	0.06	0.06	0.20	No
R3	1,263'	0.00	0.00	0.00	0.00	0.00	0.00	0.20	No
R4	1,071'	0.00	0.00	0.00	0.00	0.00	0.00	0.20	No
R5	227'	0.00	0.00	0.01	0.01	0.02	0.02	0.20	No

[1] Construction noise source and receiver locations are shown in Exhibit 10-1.
[2] Distance from receiver building facade to Project construction boundary (Project site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment (Table 10-5).
[4] City of Hesperia Municipal Code, Section 16.20.130.A
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

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12 REFERENCES

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3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
4. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
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14. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.
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20. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
21. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
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25. **U.S. Department of Transportation, Federal Highway Administration.** Special Report - Measurement, Prediction, and Mitigation. *Office of Planning, Environment, and Realty - Environment - Noise.* [Online] 2017. https://www.fhwa.dot.gov/environment/noise/construction_noise/special_report/hcn00.cfm.

26. —. *FHWA Highway Construction Noise Handbook.* Final Report August 2006.

27. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.

28. **Dowding, C. H.** *Construction Vibrations.* s.l. : Prentice Hall, 1996.

29. **DIN 4150-3.** *Structural Vibration - Effects of Vibration on Structures.* s.l. : German Institute for Standardization., 1999.

30. **Amick, H., & Randall, M.** *Environmental Vibration—A Review of ISO and ANSI Standards and Their Application in Critical Environments.* s.l. : Proceedings of SPIE, Vol. 5933, 2005.

13 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (619) 778-1971.

William Maddux, INCE
Senior Associate
URBAN CROSSROADS, INC.
(619) 788-1971
bmaddux@urbanxroads.com

EDUCATION

Bachelor of Science in Urban and Regional Planning
California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
INCE – Institute of Noise Control Engineers

PROFESSIONAL CERTIFICATIONS

Approved Acoustical Consultant • County of San Diego
FHWA Traffic Noise Model of Training • November 2004
CadnaA Basic and Advanced Training Certificate • October 2008

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APPENDIX 3.1:

CITY OF HESPERIA MUNICIPAL CODE

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16.20.125 - Noise.

A. Noise Measurement. Noise will be measured with a sound level meter, which meets the standards of the American National Standards Institute (ANSI Section S1.4-1979, Type 1 or Type 2). Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 micro-newtons per meter squared). The unit of measure shall be designated as dB(A). The building official shall be the noise control officer.

B. Noise Standards.

1. The following table describes the noise standard for emanations from any source, as it affects adjacent properties:

NOISE STANDARDS

Affected Land Use (Receiving Noise)	Maximum Noise Level	Time Period
A-1, A-2, R-1, R-3 and RR Zone Districts	55 dB(A)	10:00 p.m. - 7:00 a.m.
A-1, A-2, R-1, R-3 and RR Zone Districts	60 dB(A)*	7:00 a.m. - 10:00 p.m.
C-1, C-2, C-3, C-4, C-R, AP, and P-I Zone Districts	65 dB(A)*	Anytime
I-1 and I-2 Zone Districts	70 dB(A)*	Anytime

* Due to wind noise, the maximum permissible noise level may be adjusted so that it is no greater than five dB(A) above the ambient noise level.

2. No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:
   a. The noise standard for that receiving land use (as specified in subsection (B)(1) of this section) for a cumulative period of more than thirty (30) minutes in any hour; or
   b. The noise standard plus five dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or
   c. The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour; or
   d. The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one minute in any hour; or
   e. The noise standard plus twenty (20) dB(A) for any period of time.

C. If the measured ambient level exceeds any of the first four noise limit categories above, the allowable noise

exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

D. If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in subsection (B)(1) of this section shall be reduced by five dB(A).

E. Exempt Noises. The following sources of noise are exempt:

1. Motor vehicles not under the control of the industrial use;
2. Emergency equipment, vehicles and devices;
3. Temporary construction, repair, or demolition activities between seven a.m. and seven p.m. except Sundays and federal holidays.

(Ord. 2002-07 Exh. A, 2002; Amended during 1997 codification; Ord. 75 § 2 (part), 1990; SBCC § 87.1305)

16.20.130 - Vibration.

A. Vibration Standard. No ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the lot line; nor will any vibration be permitted which produces a particle velocity greater than or equal to 0.2 inches per second measured at or beyond the lot line.

B. Vibration Measurement. Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity or acceleration. Readings are to be made at points of maximum vibration along any lot line next to a residential or commercial district or a community industrial lot.

C. Exempt Vibrations. The following sources of vibration are not regulated by this code:

1. Motor vehicles not under the control of the industrial use;
2. Temporary construction, maintenance or demolition activities between seven a.m. and seven p.m. except Sundays and federal holidays.

(SBCC § 87.1310)

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APPENDIX 5.1:

STUDY AREA PHOTOS

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14848_L1_G_1.North
34, 26' 15.580000"117, 22' 42.770000"



14848_L1_G_2.South
34, 26' 15.160000"117, 22' 42.740000"



14848_L1_G_3.East
34, 26' 15.160000"117, 22' 42.710000"



14848_L1_G_4.West
34, 26' 15.190000"117, 22' 42.880000"



14848_L2_S_1.North
34, 26' 14.640000"117, 22' 34.720000"



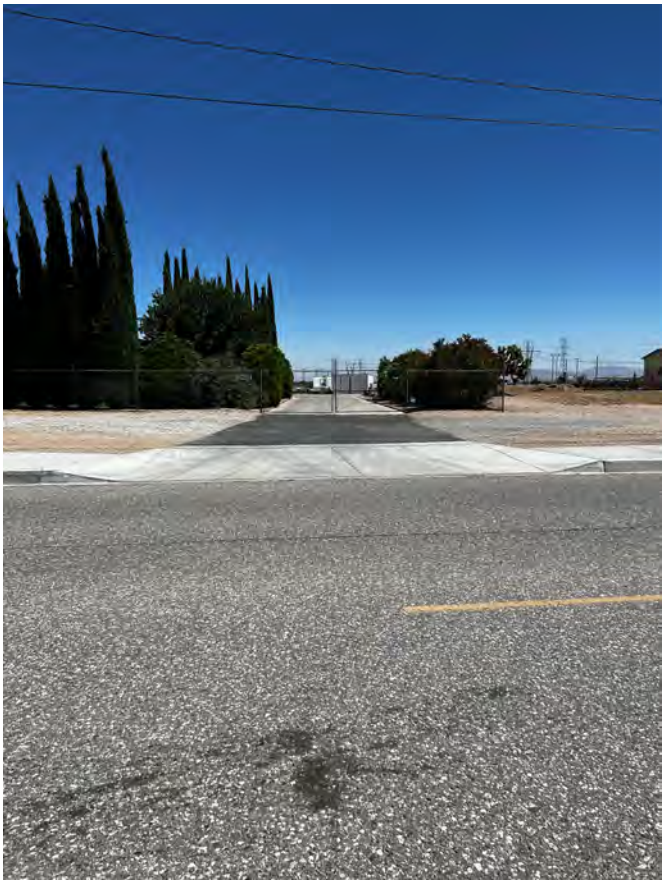
14848_L2_S_2.South
34, 26' 14.640000"117, 22' 34.780000"



14848_L2_S_3.East
34, 26' 14.670000"117, 22' 34.780000"



14848_L2_S_4.West
34, 26' 14.700000"117, 22' 34.780000"



14848_L3_Z_1.North
34, 26' 15.340000"117, 22' 7.860000"



14848_L3_Z_2.South
34, 26' 15.300000"117, 22' 7.970000"



14848_L3_Z_3.East
34, 26' 15.330000"117, 22' 7.940000"



14848_L3_Z_4.West
34, 26' 15.330000"117, 22' 7.970000"



14848_L4_W_1.North
34, 26' 3.110000"117, 22' 14.920000"



14848_L4_W_2.South
34, 26' 2.740000"117, 22' 15.010000"



14848_L4_W_3.East
34, 26' 2.750000"117, 22' 14.890000"



14848_L4_W_4.West
34, 26' 2.820000"117, 22' 14.890000"



14848_L5_A_1.North
34, 26' 16.520000"117, 22' 49.640000"



14848_L5_A_2.South
34, 26' 16.520000"117, 22' 49.670000"



14848_L5_A_3.East
34, 26' 16.520000"117, 22' 49.640000"



14848_L5_A_4.West
34, 26' 16.520000"117, 22' 49.670000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

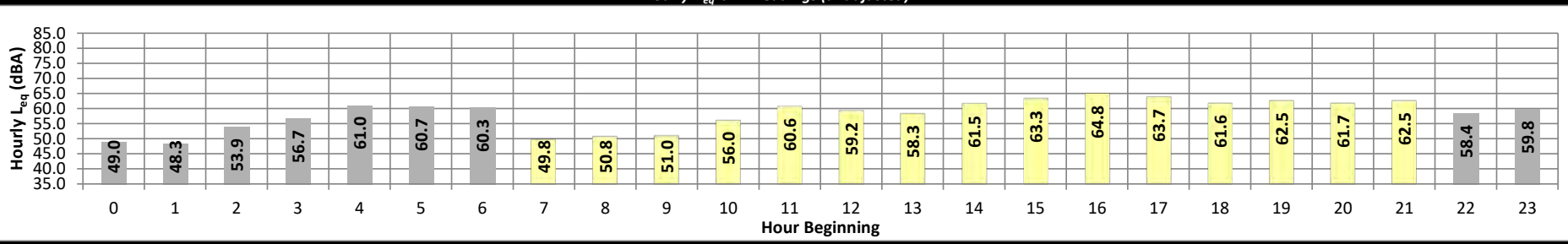
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24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L1 - Located north of the Project Site near the existing noise *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* sensitive residence at 13030 Avenal Street. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	49.0	54.1	46.1	53.8	53.3	52.0	51.3	49.4	48.4	46.9	46.6	46.2	49.0	10.0	59.0
	1	48.3	51.2	45.5	51.0	50.8	50.3	50.0	49.0	48.1	46.5	46.1	45.6	48.3	10.0	58.3
	2	53.9	57.0	51.2	56.8	56.5	56.0	55.7	54.6	53.6	52.1	51.8	51.4	53.9	10.0	63.9
	3	56.7	59.1	54.7	58.9	58.7	58.2	58.0	57.3	56.6	55.4	55.1	54.8	56.7	10.0	66.7
	4	61.0	64.3	58.7	64.0	63.7	63.1	62.8	61.6	60.8	59.4	59.2	58.8	61.0	10.0	71.0
	5	60.7	63.4	58.8	63.1	62.8	62.3	62.0	61.1	60.5	59.3	59.1	58.9	60.7	10.0	70.7
	6	60.3	66.6	58.0	65.4	64.7	63.2	62.2	60.4	59.6	58.5	58.3	58.1	60.3	10.0	70.3
Day	7	49.8	55.0	47.0	54.4	54.0	52.8	52.1	50.3	49.1	47.6	47.4	47.1	49.8	0.0	49.8
	8	50.8	58.6	46.4	58.1	57.5	55.4	53.8	51.1	49.3	47.2	46.9	46.6	50.8	0.0	50.8
	9	51.0	58.7	46.4	58.4	58.0	56.8	55.7	50.6	48.6	47.0	46.8	46.5	51.0	0.0	51.0
	10	56.0	62.2	50.8	61.8	61.5	60.4	59.6	56.8	54.6	51.9	51.5	51.0	56.0	0.0	56.0
	11	60.6	67.2	53.5	66.7	66.3	65.1	64.4	61.5	59.1	55.3	54.6	53.8	60.6	0.0	60.6
	12	59.2	65.3	52.8	64.9	64.5	63.5	62.8	60.2	57.8	54.3	53.7	53.1	59.2	0.0	59.2
	13	58.3	64.9	51.9	64.5	64.0	62.9	62.1	59.3	56.4	53.3	52.8	52.2	58.3	0.0	58.3
	14	61.5	68.5	54.0	68.0	67.6	66.5	65.7	62.4	59.7	55.8	55.0	54.3	61.5	0.0	61.5
	15	63.3	70.2	55.5	69.9	69.5	68.3	67.5	64.3	61.2	57.2	56.5	55.7	63.3	0.0	63.3
	16	64.8	71.6	56.7	71.1	70.7	69.5	68.7	65.9	63.2	58.8	57.9	57.0	64.8	0.0	64.8
	17	63.7	70.3	56.7	69.9	69.6	68.5	67.5	64.5	62.1	58.5	57.7	57.0	63.7	0.0	63.7
	18	61.6	67.3	55.5	66.9	66.5	65.6	64.8	62.6	60.6	57.2	56.6	55.7	61.6	0.0	61.6
	19	62.5	68.7	55.7	68.2	67.8	66.8	66.1	63.6	61.3	57.5	56.8	56.0	62.5	5.0	67.5
	20	61.7	68.0	55.2	67.6	67.1	66.0	65.1	62.6	60.4	57.0	56.3	55.5	61.7	5.0	66.7
	21	62.5	69.1	55.8	68.7	68.2	67.0	66.0	63.6	61.2	57.4	56.8	56.1	62.5	5.0	67.5
Night	22	58.4	63.9	53.6	63.5	63.2	62.2	61.5	59.3	57.4	54.8	54.3	53.7	58.4	10.0	68.4
	23	59.8	66.5	53.6	66.0	65.5	64.3	63.3	60.6	58.4	55.3	54.6	53.9	59.8	10.0	69.8

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	49.8	55.0	46.4	54.4	54.0	52.8	52.1	50.3	48.6	47.0	46.8	46.5
	Max	64.8	71.6	56.7	71.1	70.7	69.5	68.7	65.9	63.2	58.8	57.9	57.0
Energy Average		61.0	Average:		65.3	64.8	63.7	62.8	60.0	57.6	54.4	53.8	53.2
Night	Min	48.3	51.2	45.5	51.0	50.8	50.3	50.0	49.0	48.1	46.5	46.1	45.6
	Max	61.0	66.6	58.8	66.0	65.5	64.3	63.3	61.6	60.8	59.4	59.2	58.9
Energy Average		58.2	Average:		60.3	59.9	59.1	58.5	57.0	55.9	54.3	53.9	53.5

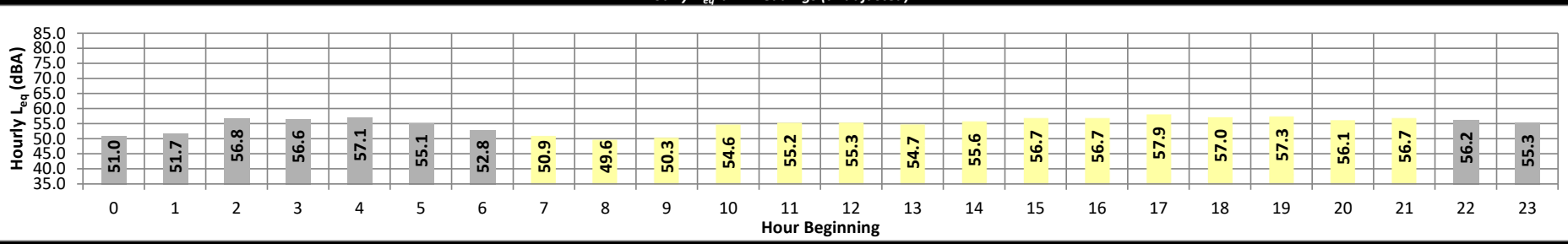
L_{eq} (dBA)		
24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
60.1	**61.0**	**58.2**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L2 - Located south of the existing noise sensitive residence at *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* 13164 Avenal Road with the Project Site. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	51.0	55.0	48.2	54.7	54.2	53.3	52.9	51.7	50.5	49.0	48.6	48.3	51.0	10.0	61.0
	1	51.7	55.1	48.3	54.9	54.6	54.1	53.7	52.5	51.3	49.3	48.9	48.4	51.7	10.0	61.7
	2	56.8	60.2	53.4	60.0	59.7	59.2	58.9	57.6	56.5	54.6	54.1	53.5	56.8	10.0	66.8
	3	56.6	58.9	54.3	58.8	58.6	58.3	58.1	57.2	56.4	55.0	54.7	54.4	56.6	10.0	66.6
	4	57.1	60.0	54.8	59.7	59.5	59.0	58.7	57.7	56.8	55.5	55.3	54.9	57.1	10.0	67.1
	5	55.1	58.0	53.1	57.8	57.6	57.1	56.8	55.6	54.8	53.6	53.4	53.2	55.1	10.0	65.1
	6	52.8	56.5	50.3	56.0	55.7	55.2	54.7	53.5	52.4	50.9	50.7	50.3	52.8	10.0	62.8
Day	7	50.9	54.6	48.5	54.3	54.1	53.5	53.1	51.5	50.4	49.1	48.8	48.6	50.9	0.0	50.9
	8	49.6	54.7	47.1	54.4	53.9	52.6	51.7	50.0	49.1	47.7	47.4	47.2	49.6	0.0	49.6
	9	50.3	55.5	47.1	55.2	54.9	54.0	53.4	50.8	49.2	47.6	47.4	47.2	50.3	0.0	50.3
	10	54.6	59.9	51.6	59.5	59.1	57.8	56.8	54.9	53.9	52.4	52.1	51.7	54.6	0.0	54.6
	11	55.2	59.6	52.1	59.1	58.6	57.9	57.4	55.8	54.7	53.0	52.6	52.2	55.2	0.0	55.2
	12	55.3	58.9	52.5	58.5	58.1	57.5	57.1	56.0	54.9	53.4	53.0	52.6	55.3	0.0	55.3
	13	54.7	58.7	51.9	58.3	58.0	57.2	56.7	55.3	54.2	52.7	52.4	52.1	54.7	0.0	54.7
	14	55.6	60.4	52.7	60.0	59.6	58.4	57.8	56.2	55.1	53.5	53.1	52.8	55.6	0.0	55.6
	15	56.7	60.7	53.8	60.4	60.1	59.3	58.9	57.3	56.3	54.7	54.4	54.0	56.7	0.0	56.7
	16	56.7	61.4	53.8	60.9	60.3	59.2	58.6	57.3	56.3	54.6	54.3	53.9	56.7	0.0	56.7
	17	57.9	63.3	54.3	63.0	62.7	61.9	61.2	58.0	56.8	55.2	54.9	54.5	57.9	0.0	57.9
	18	57.0	60.9	53.9	60.5	60.0	59.4	59.0	57.8	56.6	54.8	54.5	54.1	57.0	0.0	57.0
	19	57.3	62.0	54.1	61.6	61.1	60.0	59.4	57.8	56.7	55.1	54.7	54.3	57.3	5.0	62.3
	20	56.1	60.8	53.3	60.3	59.9	59.0	58.4	56.5	55.5	54.0	53.7	53.4	56.1	5.0	61.1
	21	56.7	60.7	53.8	60.4	60.0	59.1	58.5	57.4	56.4	54.7	54.4	53.9	56.7	5.0	61.7
Night	22	56.2	61.0	53.0	60.6	60.1	58.9	58.4	57.0	55.7	53.9	53.5	53.1	56.2	10.0	66.2
	23	55.3	59.4	51.8	59.0	58.5	57.9	57.5	56.1	54.8	52.9	52.5	52.0	55.3	10.0	65.3

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	49.6	54.6	47.1	54.3	53.9	52.6	51.7	50.0	49.1	47.6	47.4	47.2
	Max	57.9	63.3	54.3	63.0	62.7	61.9	61.2	58.0	56.8	55.2	54.9	54.5
Energy Average		55.6	Average:		59.1	58.7	57.8	57.2	55.5	54.4	52.8	52.5	52.2
Night	Min	51.0	55.0	48.2	54.7	54.2	53.3	52.9	51.7	50.5	49.0	48.6	48.3
	Max	57.1	61.0	54.8	60.6	60.1	59.2	58.9	57.7	56.8	55.5	55.3	54.9
Energy Average		55.2	Average:		57.9	57.6	57.0	56.6	55.4	54.4	52.7	52.4	52.0

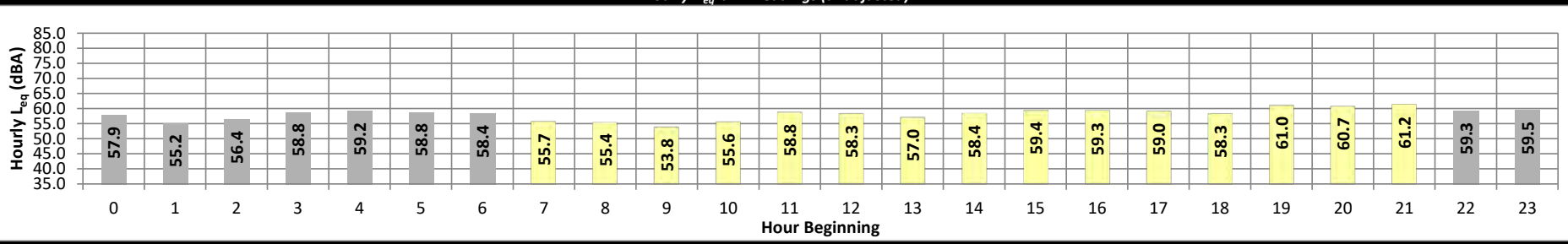
L_{eq} (dBA)	Daytime (7am-10pm)	Nighttime (10pm-7am)
24-Hour		
55.4	**55.6**	**55.2**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L3 - Located east of the Project site near the existing noise *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* sensitive residence at 10445 Avenal Street. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	57.9	63.7	54.1	63.2	62.5	61.1	60.3	58.5	57.1	55.1	54.7	54.2	57.9	10.0	67.9
	1	55.2	60.7	51.4	60.4	60.0	58.5	57.7	55.8	54.4	52.3	51.9	51.5	55.2	10.0	65.2
	2	56.4	62.5	52.7	62.2	61.7	60.2	59.0	56.9	55.5	53.6	53.3	52.8	56.4	10.0	66.4
	3	58.8	62.7	55.1	62.5	62.2	61.5	60.9	59.6	58.4	56.1	55.7	55.2	58.8	10.0	68.8
	4	59.2	64.5	55.6	64.4	64.0	62.9	61.8	59.6	58.5	56.5	56.1	55.7	59.2	10.0	69.2
	5	58.8	66.5	55.3	66.1	65.4	63.2	61.6	58.5	57.5	56.0	55.7	55.4	58.8	10.0	68.8
	6	58.4	65.8	54.6	65.4	64.8	62.6	61.4	58.5	57.2	55.3	55.0	54.7	58.4	10.0	68.4
Day	7	55.7	64.3	51.1	64.0	63.3	60.9	59.0	55.5	53.7	51.8	51.5	51.2	55.7	0.0	55.7
	8	55.4	65.4	49.2	65.1	64.6	62.3	59.8	54.0	51.9	50.0	49.7	49.3	55.4	0.0	55.4
	9	53.8	64.6	48.2	64.1	63.1	60.0	57.3	52.1	50.7	49.0	48.7	48.3	53.8	0.0	53.8
	10	55.6	65.9	48.6	65.4	64.6	62.2	60.1	54.3	51.8	49.5	49.1	48.7	55.6	0.0	55.6
	11	58.8	68.1	50.0	67.7	67.2	65.5	63.6	58.4	55.5	51.5	50.9	50.3	58.8	0.0	58.8
	12	58.3	68.1	49.8	67.5	66.6	64.1	62.3	58.5	55.3	51.2	50.6	50.0	58.3	0.0	58.3
	13	57.0	67.2	49.2	66.8	66.0	63.8	61.7	56.2	53.2	50.2	49.8	49.3	57.0	0.0	57.0
	14	58.4	68.2	50.8	67.6	66.7	64.1	62.9	58.0	55.5	52.6	51.9	51.0	58.4	0.0	58.4
	15	59.4	67.7	51.3	67.2	66.6	64.8	63.4	60.0	57.1	53.1	52.4	51.5	59.4	0.0	59.4
	16	59.3	67.6	52.1	67.2	66.6	64.8	63.4	59.6	56.9	53.4	52.9	52.3	59.3	0.0	59.3
	17	59.0	67.4	52.7	66.9	66.2	64.1	63.0	59.2	56.9	54.0	53.4	52.9	59.0	0.0	59.0
	18	58.3	66.1	53.4	65.6	64.9	62.7	61.5	58.6	56.6	54.4	54.0	53.6	58.3	0.0	58.3
	19	61.0	67.9	56.7	67.3	66.7	64.9	63.7	61.4	59.9	57.8	57.3	56.9	61.0	5.0	66.0
	20	60.7	67.3	56.6	66.8	66.2	64.5	63.4	61.2	59.7	57.7	57.3	56.8	60.7	5.0	65.7
	21	61.2	67.3	57.4	66.8	66.3	64.5	63.7	61.8	60.4	58.5	58.1	57.6	61.2	5.0	66.2
Night	22	59.3	66.8	55.1	66.3	65.7	63.4	62.0	59.4	58.0	56.1	55.7	55.3	59.3	10.0	69.3
	23	59.5	67.5	54.6	67.1	66.5	64.4	62.9	59.4	57.9	55.8	55.3	54.8	59.5	10.0	69.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	53.8	64.3	48.2	64.0	63.1	60.0	57.3	52.1	50.7	49.0	48.7	48.3
	Max	61.2	68.2	57.4	67.7	67.2	65.5	63.7	61.8	60.4	58.5	58.1	57.6
Energy Average		58.6	Average:		66.4	65.7	63.5	61.9	57.9	55.7	53.0	52.5	52.0
Night	Min	55.2	60.7	51.4	60.4	60.0	58.5	57.7	55.8	54.4	52.3	51.9	51.5
	Max	59.5	67.5	55.6	67.1	66.5	64.4	62.9	59.6	58.5	56.5	56.1	55.7
Energy Average		58.4	Average:		64.2	63.7	62.0	60.8	58.5	57.2	55.2	54.8	54.4

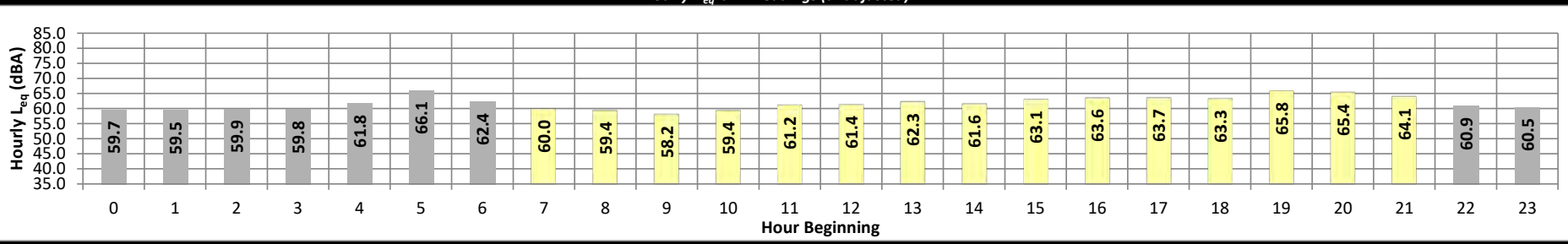
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
58.5	**58.6**	**58.4**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L4 - Located southeast of the Project site near the existing *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* noise sensitive residence at 10122 Mt. Whitney Way. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	59.7	67.3	55.7	67.0	66.4	64.6	63.2	59.5	57.9	56.4	56.1	55.8	59.7	10.0	69.7
	1	59.5	66.9	55.5	66.5	66.0	64.0	62.1	59.6	58.3	56.5	56.1	55.7	59.5	10.0	69.5
	2	59.9	66.4	56.4	66.0	65.6	63.7	62.2	60.1	59.1	57.3	56.9	56.5	59.9	10.0	69.9
	3	59.8	69.7	53.9	69.4	68.9	66.3	63.8	58.3	56.6	54.8	54.3	54.0	59.8	10.0	69.8
	4	61.8	71.2	54.5	71.0	70.5	68.3	66.8	61.1	57.5	55.2	54.9	54.6	61.8	10.0	71.8
	5	66.1	77.4	60.0	76.8	75.9	72.2	69.5	64.4	62.4	60.7	60.4	60.1	66.1	10.0	76.1
	6	62.4	72.3	54.8	71.9	71.2	68.8	67.3	61.8	57.7	55.5	55.2	54.9	62.4	10.0	72.4
Day	7	60.0	70.4	48.0	70.1	69.5	67.4	65.9	59.0	52.5	48.8	48.4	48.1	60.0	0.0	60.0
	8	59.4	69.9	46.6	69.6	68.9	66.9	65.4	58.2	51.4	47.5	47.2	46.8	59.4	0.0	59.4
	9	58.2	69.7	45.8	69.4	68.6	65.7	63.3	56.1	50.2	46.7	46.4	46.0	58.2	0.0	58.2
	10	59.4	71.1	47.2	70.6	69.9	66.7	64.3	57.3	52.5	48.5	48.0	47.4	59.4	0.0	59.4
	11	61.2	71.2	50.0	70.8	70.1	67.8	66.0	61.0	57.1	51.9	51.1	50.3	61.2	0.0	61.2
	12	61.4	70.3	51.4	69.9	69.0	67.2	66.0	61.9	58.2	53.6	52.7	51.7	61.4	0.0	61.4
	13	62.3	73.7	50.7	73.4	72.4	69.0	66.7	61.1	57.1	52.5	51.7	50.9	62.3	0.0	62.3
	14	61.6	70.1	51.6	69.7	69.1	67.3	66.2	62.2	58.7	54.1	52.9	51.9	61.6	0.0	61.6
	15	63.1	70.8	53.4	70.4	69.8	68.3	67.4	64.1	60.8	56.0	55.1	53.8	63.1	0.0	63.1
	16	63.6	71.8	54.2	71.4	70.7	68.8	67.8	64.4	61.1	56.5	55.6	54.5	63.6	0.0	63.6
	17	63.7	72.8	53.4	72.3	71.6	69.4	68.1	64.3	60.3	55.4	54.6	53.7	63.7	0.0	63.7
	18	63.3	72.0	53.6	71.6	71.0	69.2	68.1	64.0	59.9	55.1	54.5	53.8	63.3	0.0	63.3
	19	65.8	74.9	57.8	74.7	73.9	71.0	69.8	66.0	63.4	59.6	58.9	58.1	65.8	5.0	70.8
	20	65.4	75.0	57.1	74.6	74.1	71.5	69.6	65.2	62.2	58.6	57.9	57.3	65.4	5.0	70.4
	21	64.1	70.4	58.2	70.1	69.7	68.4	67.7	65.0	62.7	59.6	59.0	58.4	64.1	5.0	69.1
Night	22	60.9	69.8	54.5	69.5	69.0	66.8	65.2	60.5	57.8	55.6	55.2	54.7	60.9	10.0	70.9
	23	60.5	68.1	55.0	67.8	67.3	65.3	64.1	60.8	58.8	56.3	55.9	55.2	60.5	10.0	70.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	58.2	69.7	45.8	69.4	68.6	65.7	63.3	56.1	50.2	46.7	46.4	46.0
	Max	65.8	75.0	58.2	74.7	74.1	71.5	69.8	66.0	63.4	59.6	59.0	58.4
Energy Average		62.7	Average:		71.2	70.5	68.3	66.8	62.0	57.9	53.6	52.9	52.2
Night	Min	59.5	66.4	53.9	66.0	65.6	63.7	62.1	58.3	56.6	54.8	54.3	54.0
	Max	66.1	77.4	60.0	76.8	75.9	72.2	69.5	64.4	62.4	60.7	60.4	60.1
Energy Average		61.7	Average:		69.6	69.0	66.7	64.9	60.7	58.4	56.5	56.1	55.7

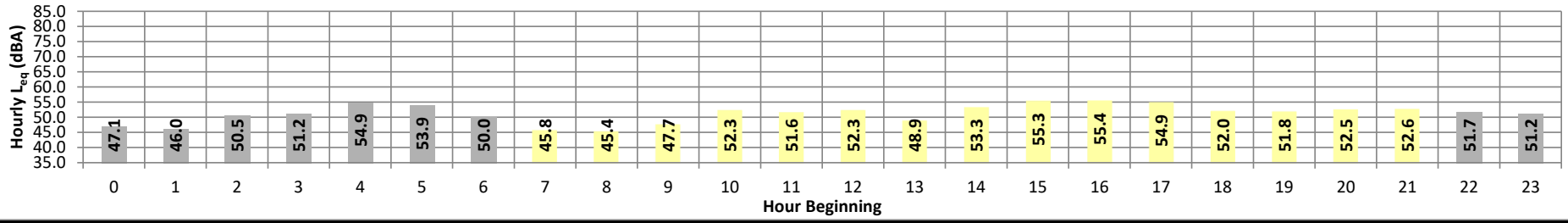
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
62.4	**62.7**	**61.7**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L5 - Located south of the existing noise sensitive residence at *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* 10376 Wellington Road. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	47.1	49.8	44.9	49.6	49.3	48.8	48.5	47.6	46.9	45.6	45.3	45.0	47.1	10.0	57.1
	1	46.0	48.6	43.8	48.4	48.2	47.8	47.6	46.6	45.8	44.5	44.2	43.9	46.0	10.0	56.0
	2	50.5	53.7	48.1	53.5	53.2	52.7	52.3	51.2	50.2	48.8	48.6	48.2	50.5	10.0	60.5
	3	51.2	56.9	48.5	56.4	55.8	54.1	53.2	51.6	50.6	49.2	48.9	48.6	51.2	10.0	61.2
	4	54.9	57.3	53.1	57.1	56.9	56.4	56.2	55.4	54.6	53.7	53.5	53.2	54.9	10.0	64.9
	5	53.9	56.2	52.2	56.0	55.8	55.4	55.1	54.3	53.7	52.7	52.5	52.3	53.9	10.0	63.9
	6	50.0	54.3	48.4	53.4	52.6	51.3	51.0	50.4	49.8	48.9	48.7	48.5	50.0	10.0	60.0
Day	7	45.8	50.9	43.9	50.1	49.2	48.0	47.3	46.1	45.3	44.4	44.2	44.0	45.8	0.0	45.8
	8	45.4	52.3	42.4	51.4	50.5	49.2	48.2	45.4	44.4	43.0	42.8	42.5	45.4	0.0	45.4
	9	47.7	56.0	43.0	54.9	54.0	51.8	51.0	48.4	46.0	43.8	43.5	43.1	47.7	0.0	47.7
	10	52.3	60.0	47.0	59.2	58.2	56.4	55.6	53.1	50.9	47.9	47.5	47.2	52.3	0.0	52.3
	11	51.6	59.6	46.7	59.0	58.3	56.0	55.0	51.9	49.6	47.5	47.2	46.8	51.6	0.0	51.6
	12	52.3	60.4	46.8	59.9	59.1	57.4	56.2	52.7	50.2	47.7	47.3	46.9	52.3	0.0	52.3
	13	48.9	53.9	46.2	53.4	52.9	51.8	51.0	49.4	48.3	46.8	46.6	46.3	48.9	0.0	48.9
	14	53.3	61.2	47.8	60.6	59.8	58.1	56.7	53.7	51.6	48.8	48.3	47.9	53.3	0.0	53.3
	15	55.3	63.1	49.0	62.5	61.8	60.4	59.4	55.8	53.2	50.2	49.7	49.2	55.3	0.0	55.3
	16	55.4	63.8	49.4	63.1	62.3	60.6	59.3	55.7	53.3	50.5	50.1	49.5	55.4	0.0	55.4
	17	54.9	63.1	49.9	62.4	61.6	59.8	58.6	54.9	52.9	50.9	50.5	50.0	54.9	0.0	54.9
	18	52.0	59.0	48.6	58.2	57.4	55.5	54.7	52.4	51.0	49.3	49.0	48.7	52.0	0.0	52.0
	19	51.8	57.8	49.0	56.9	56.2	54.6	53.9	52.3	51.2	49.7	49.4	49.1	51.8	5.0	56.8
	20	52.5	57.4	49.4	57.0	56.5	55.7	55.1	53.1	51.8	50.2	49.9	49.5	52.5	5.0	57.5
	21	52.6	57.2	49.9	56.8	56.3	55.4	54.8	53.2	52.0	50.7	50.4	50.0	52.6	5.0	57.6
Night	22	51.7	55.4	48.9	55.1	54.7	54.2	53.8	52.5	51.1	49.8	49.5	49.1	51.7	10.0	61.7
	23	51.2	55.5	48.3	55.1	54.6	53.8	53.3	51.7	50.7	49.1	48.8	48.4	51.2	10.0	61.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	45.4	50.9	42.4	50.1	49.2	48.0	47.3	45.4	44.4	43.0	42.8	42.5
	Max	55.4	63.8	49.9	63.1	62.3	60.6	59.4	55.8	53.3	50.9	50.5	50.0
Energy Average		52.3	Average:		57.7	56.9	55.4	54.5	51.9	50.1	48.1	47.8	47.4
Night	Min	46.0	48.6	43.8	48.4	48.2	47.8	47.6	46.6	45.8	44.5	44.2	43.9
	Max	54.9	57.3	53.1	57.1	56.9	56.4	56.2	55.4	54.6	53.7	53.5	53.2
Energy Average		51.5	Average:		53.8	53.5	52.7	52.3	51.3	50.4	49.1	48.9	48.6

24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
52.0	**52.3**	**51.5**

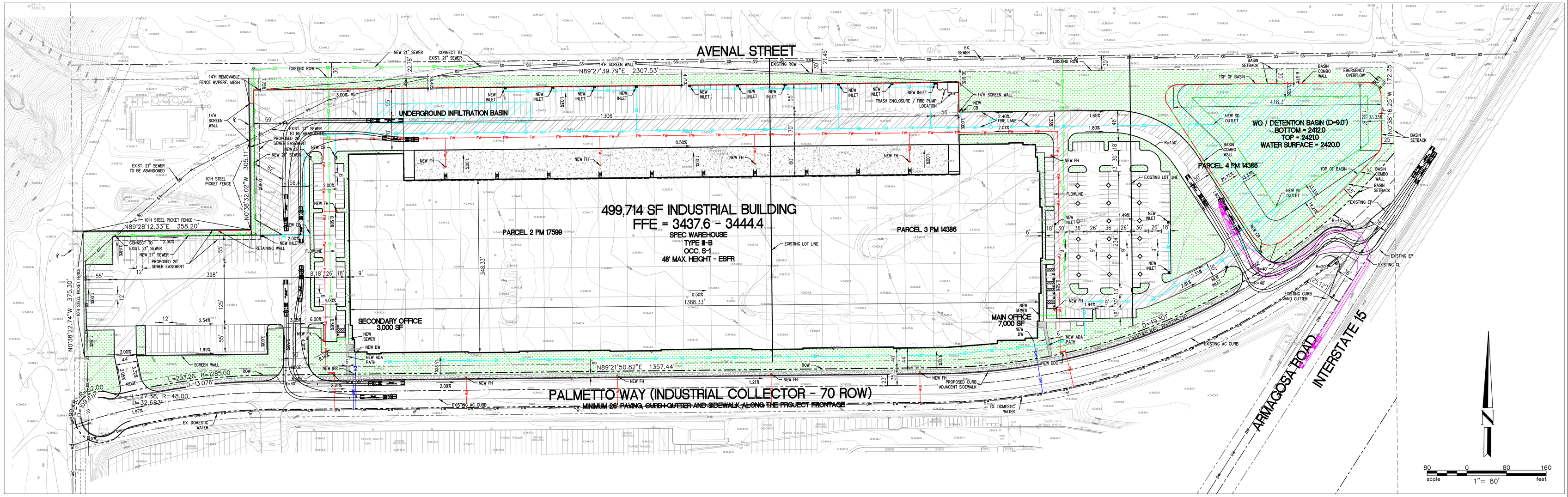
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APPENDIX 6.1:

SITE PLAN

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HESPERIA SPEC INDUSTRIAL
SITE PLAN EXHIBIT
COUNTY OF SAN BERNARDINO



OWNER

RACHAMIN 5, LLC
6001 EAST SLAUSSON AVENUE
COMMERCE, CA 90040
TEL: (213) 769-4222 X107

CONTACT: RAMIN NAMVAR

ARCHITECT

RGA
15231 ALTON PARKWAY, SUITE 100
IRVINE, CA 92618
(949) 341-0923

CONTACT: CHRIS SAVAGE

CIVIL ENGINEER

WESTLAND GROUP, INC.
8885 HAVEN AVENUE, SUITE 100,
RANCHO CUCAMONGA, CA 91730
(909) 403-5647

CONTACT: MATT KUNKLE

UTILITY PURVEYORS

SCE
PO BOX 6400
RANCHO CUCAMONGA, CA
91729
(760) 951-3253
ATTENTION: JERIMON ROMERO

SOUTHWEST GAS CO.
13471 MARIPOSA ROAD
VICTORVILLE, CA
(760) 951-4053
ATTENTION: DIANE REICHLE

VERIZON
16071 MOHAVE DR BLDG A
VICTORVILLE, CA 92395
(800) 483-3000
ATTENTION: CHRIS THORPE

CITY OF HESPERIA, WATER DIST.
9700 SEVENTH AVE.
HESPERIA, CA 92345
(760) 947-1417

CITY OF HESPERIA, SEWER
9700 SEVENTH AVE.,
HESPERIA, CA 92345
(760) 947-1417

CHARTER COMMUNICATIONS
9536 "C" AVE
VICTORVILLE, CA
(866) 499-8080

LEGAL DESCRIPTION

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL 1:
PARCELS 3 AND 4 OF PARCEL MAP 14386, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 181, PAGES 62 AND 63 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 2:
PARCEL 2 OF PARCEL MAP 17599, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 213, PAGES 54 AND 55 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN 0405-072-52-0-000; 0405-072-53-0-000; 0405-072-55-0-000

PROJECT EARTHWORK DATA

2D GRADING AREA: 174,087 SQ.YD.
CUT: 91,404 CY
FILL: 150,706 CY
NET: 59,302 CY FILL
NOTE: ALL QUANTITIES ARE UNADJUSTED

HYDROLOGY SUMMARY

AREA ID	AREA (AC)	TC (MIN)	Q100 (CF)	V100 (CF)	RETENTION PROVIDED (CF)	TOTAL V PROVIDED (CF)
A	4.37	9.34	16.92	75,232	549,068	549,068
B	25.88	14.25	89.03	450,358		
TOTAL	30.26	23.59	105.96	525,591		

BASIN SUMMARY TABLE

BASIN ID	REQUIRED VOLUME (Q100)	PROVIDED VOLUME
ABOVE GROUND BASIN	450,358 CF	468,984 CF
UNDERGROUND INFILTRATION BASIN	75,232 CF	80,084 CF
TOTAL	525,590 CF	549,068 CF

EASEMENT NOTES

ITEM A, B & C PERTAIN TO TAX MATTERS

1. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
2. EASEMENT(S) IN FAVOR OF THE PUBLIC OVER ANY EXISTING ROADS LYING WITHIN SAID LAND.
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
3. THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,
   RECORDING DATE: DECEMBER 31, 1948
   RECORDING NO: IN BOOK 2342, PAGE 152 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.
4. THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,
   RECORDING DATE: MAY 10, 1961
   RECORDING NO: IN BOOK 5426, PAGE 35 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.
5. WAIVER OF ANY CLAIMS FOR DAMAGES TO SAID LAND BY REASON OF THE LOCATION, CONSTRUCTION, LANDSCAPING OR MAINTENANCE OF THE STREET OR HIGHWAY ADJOINING SAID LAND, AS CONTAINED IN THE DEED TO COUNTY/CITY/STATE: STATE OF CALIFORNIA
   RECORDING DATE: MAY 10, 1961
   RECORDING NO.: IN BOOK 5426, PAGE 35 OFFICIAL RECORDS
   DOES NOT AFFECT SUBJECT PROPERTY.
6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   DISCLOSED BY: NOTICE OF LIS PENDENS
   CASE NO: 144429
   COURT: SUPERIOR COURT
   PURPOSE: WATER PIPELINE SYSTEM
   RECORDING DATE: MAY 17, 1971
   RECORDING NO: IN BOOK 7669, PAGE 97 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY
   PURPOSE: PUBLIC UTILITIES AND ACCESS
   RECORDING DATE: MARCH 13, 1987
   RECORDING NO: AS INSTRUMENT NO. 1987-081745 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.

EASEMENT NOTES (CONTINUED)

8. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   GRANTED TO: HESPERIA WATER DISTRICT
   PURPOSE: PIPELINE(S) AND PUBLIC PURPOSES AND INGRESS AND EGRESS
   RECORDING DATE: AUGUST 11, 1992
   RECORDING NO: AS INSTRUMENT NO. 1992-333349 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
9. THE LAND DESCRIBED HEREIN IS INCLUDED WITHIN A PROJECT AREA OF THE REDEVELOPMENT AGENCY SHOWN BELOW, AND THAT PROCEEDINGS FOR THE REDEVELOPMENT OF SAID PROJECT HAVE BEEN INSTITUTED UNDER THE REDEVELOPMENT LAW (SUCH REDEVELOPMENT TO PROCEED ONLY AFTER THE ADOPTION OF THE REDEVELOPMENT PLAN) AS DISCLOSED BY A DOCUMENT.
   REDEVELOPMENT AGENCY: HESPERIA COMMUNITY REDEVELOPMENT AGENCY
   RECORDING DATE: JULY 21, 1993
   RECORDING NO: AS INSTRUMENT NO. 1993-310136 OFFICIAL RECORDS
   AND RECORDING DATE: DECEMBER 03, 2007
   AND RECORDING NO: AS INSTRUMENT NO. 2007-0676018 OFFICIAL RECORDS
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
10. VARIOUS MATTERS INCLUDING, BUT NOT LIMITED TO, REQUIREMENTS FOR DEVELOPING OR IMPROVING THE LAND, PROPOSED EASEMENTS, COVENANTS, CONDITIONS, RESTRICTIONS AND PROVISIONS SET FORTH ON PARCEL MAP 14386, IN BOOK 181, PAGES 62 AND 63 OF PARCEL MAPS.
    REFER TO ITEMS 8 & 12.
11. AGREEMENT FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS
    RECORDING DATE: FEBRUARY 07, 1997
    RECORDING NO: AS INSTRUMENT NO. 19970044707 OFFICIAL RECORDS
    BLANKET IN NATURE, CAN NOT BE PLOTTED
12. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
    GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY
    PURPOSE: OVERHEAD ELECTRICAL SUPPLY SYSTEMS AND COMMUNICATION SYSTEMS AND APPURTENANCES
    RECORDING DATE: NOVEMBER 01, 2006
    RECORDING NO: AS INSTRUMENT NO. 2006-0746828 OFFICIAL RECORDS
    AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT

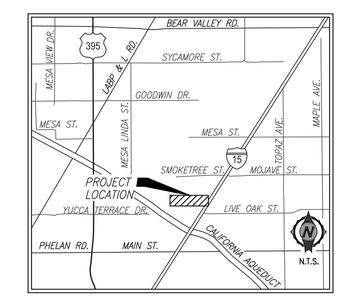
ITEM 13 THROUGH 19 PERTAIN TO TITLE MATTERS

LEGEND

- DOMESTIC WATER LINE — DW
- SANITARY SEWER — SS
- FIRE WATER LINE — FW
- STORM DRAIN LINE — SD
- FIRE HYDRANT
- PROPERTY LINE
- LANDSCAPE
- SEWER LATERAL
- RETAINING/SCREEN WALL
- COMBO WALL
- INFILTRATION BASIN
- NEW SIDEWALK
- FIRE LANE

PROJECT SITE DATA

APPROX. NET INDUSTRIAL SITE AREA:	1,329,521 SF / 30.52 AC
BUILDING AREA:	499,714 SF
COVERAGE:	37.6 %
F.A.R.	0.376
AUTO PARKING REQUIRED:	
10,000 SF OFFICE @ 3.33 / 1000 SF	33 STALLS
499,714 SF WAREHOUSE: 20+0.4/1000 O/10K SF	212 STALLS
TOTAL	245 STALLS
PARKING PROVIDED:	
STANDARD STALLS	304 STALLS
ACCESSIBLE STALLS	7 STALLS
TOTAL STALLS PROVIDED	311 STALLS
DOCK LOADING POSITIONS	72 DOCKS
TRAILER PARKING STALLS	171 TRAILERS
LANDSCAPE PROVIDED	306,000 SF / 23.0 %



VICINITY MAP
N.T.S

WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS 8885 HAVEN AVE., SUITE 100, RANCHO CUCAMONGA CA 91730 Phone: (909) 989-9789 Fax: (909) 989-9660	CITY OF HESPERIA SPEC INDUSTRIAL		
DRAWN BY: JP DESIGNED BY: JP CHECKED BY: MK	SITE PLAN EXHIBIT	SCALE: 1" = 80' DATE: JULY 2025 SHT NO.: 1 OF 1	

Drawing Name: P:\Projects\2021\2021-196 - Hesperia Industrial - RGA - Chris Savage\06 Engineering\Sheets\CONCEPTUAL\Site Plan Exhibit\01_2021-196_SP.dwg
Last Updated: Jul 09, 2025 - 9:00am By: MattKunkle

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	460 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	46 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	25 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	38.324
Medium Trucks:	38.093
Heavy Trucks:	38.115

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-15.48	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-32.81	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-28.85	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	53.4	51.5	49.7	43.7	52.3	52.9
Medium Trucks:	47.1	45.6	39.2	37.7	46.2	46.4
Heavy Trucks:	55.9	54.4	45.4	46.7	55.0	55.1
Vehicle Noise:	58.2	56.6	51.4	48.8	57.2	57.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	6	12	26	56
CNEL:	6	13	27	59

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,740 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	474 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	25 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	38.324
Medium Trucks:	38.093
Heavy Trucks:	38.115

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.35	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-22.68	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-18.72	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.5	61.6	59.9	53.8	62.4	63.0
Medium Trucks:	57.2	55.7	49.4	47.8	56.3	56.5
Heavy Trucks:	66.0	64.6	55.5	56.8	65.1	65.3
Vehicle Noise:	68.3	66.7	61.5	58.9	67.4	67.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	57	124	267
CNEL:	28	60	130	279

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,432 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	543 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	25 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	92.59%
Medium Trucks:	84.8%	4.9%	10.3%	1.88%
Heavy Trucks:	86.5%	2.7%	10.8%	5.53%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	38.324
Medium Trucks:	38.093
Heavy Trucks:	38.115

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.82	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-21.75	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.06	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.1	62.2	60.4	54.3	63.0	63.6
Medium Trucks:	58.2	56.7	50.3	48.7	57.2	57.4
Heavy Trucks:	67.7	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	69.6	68.0	62.4	60.2	68.6	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	70	150	324
CNEL:	34	73	157	338

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,700 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	470 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	25 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	38.324
Medium Trucks:	38.093
Heavy Trucks:	38.115

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.39	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-22.72	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-18.76	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.5	61.6	59.8	53.8	62.4	63.0
Medium Trucks:	57.2	55.7	49.3	47.8	56.2	56.5
Heavy Trucks:	66.0	64.5	55.5	56.8	65.1	65.2
Vehicle Noise:	68.3	66.7	61.5	58.9	67.3	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	57	123	265
CNEL:	28	60	129	278

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,392 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	539 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	25 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	92.58%
Medium Trucks:	84.8%	4.9%	10.3%	1.88%
Heavy Trucks:	86.5%	2.7%	10.8%	5.54%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	38.324
Medium Trucks:	38.093
Heavy Trucks:	38.115

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.85	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-21.78	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-17.09	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.0	62.1	60.4	54.3	62.9	63.5
Medium Trucks:	58.1	56.6	50.3	48.7	57.2	57.4
Heavy Trucks:	67.6	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	69.5	68.0	62.3	60.2	68.6	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	70	150	323
CNEL:	34	72	156	336

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Amargosa Rd.
Road Segment: n/o Palmetto Wy.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,140 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	914 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-2.96	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-20.29	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-16.33	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.8	64.9	63.1	57.0	65.7	66.3
Medium Trucks:	60.3	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	68.6	67.2	58.1	59.4	67.7	67.9
Vehicle Noise:	71.1	69.5	64.6	61.7	70.2	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	52	111	239	515
CNEL:	54	116	251	540

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Amargosa Rd.
Road Segment: n/o Palmetto Wy.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,550 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,055 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-2.33	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-19.66	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-15.70	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.4	65.5	63.7	57.7	66.3	66.9
Medium Trucks:	60.9	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	69.2	67.8	58.8	60.0	68.4	68.5
Vehicle Noise:	71.8	70.2	65.2	62.4	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	57	122	263	567
CNEL:	59	128	276	595

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Amargosa Rd.
Road Segment: n/o Palmetto Wy.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,748 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,075 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.05%
Medium Trucks:	84.8%	4.9%	10.3%	1.71%
Heavy Trucks:	86.5%	2.7%	10.8%	4.24%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-2.25	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-19.66	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-15.70	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.5	65.6	63.8	57.7	66.4	67.0
Medium Trucks:	60.9	59.4	53.0	51.5	59.9	60.2
Heavy Trucks:	69.2	67.8	58.8	60.0	68.4	68.5
Vehicle Noise:	71.8	70.2	65.2	62.4	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	57	123	264	570
CNEL:	60	129	277	598

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Amargosa Rd.
Road Segment: n/o Palmetto Wy.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,110 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,311 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.39	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-18.72	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-14.76	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.3	66.4	64.7	58.6	67.2	67.8
Medium Trucks:	61.8	60.3	53.9	52.4	60.9	61.1
Heavy Trucks:	70.2	68.7	59.7	60.9	69.3	69.4
Vehicle Noise:	72.7	71.1	66.1	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	66	141	304	655
CNEL:	69	148	319	687

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Amargosa Rd.
Road Segment: n/o Palmetto Wy.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,308 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,331 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	94.03%
Medium Trucks:	84.8%	4.9%	10.3%	1.71%
Heavy Trucks:	86.5%	2.7%	10.8%	4.26%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.32	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-18.72	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-14.76	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.4	66.5	64.7	58.7	67.3	67.9
Medium Trucks:	61.8	60.3	53.9	52.4	60.9	61.1
Heavy Trucks:	70.2	68.7	59.7	60.9	69.3	69.4
Vehicle Noise:	72.7	71.1	66.2	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	66	142	305	658
CNEL:	69	149	320	690

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Amargosa Rd.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,940 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	694 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-4.15	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-21.48	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-17.52	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.6	63.7	61.9	55.8	64.5	65.1
Medium Trucks:	59.1	57.5	51.2	49.6	58.1	58.3
Heavy Trucks:	67.4	66.0	56.9	58.2	66.5	66.7
Vehicle Noise:	69.9	68.4	63.4	60.5	69.0	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	43	92	199	429
CNEL:	45	97	209	450

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Amargosa Rd.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,070 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,207 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.75	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-19.08	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-15.12	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.0	66.1	64.3	58.2	66.9	67.5
Medium Trucks:	61.5	60.0	53.6	52.0	60.5	60.7
Heavy Trucks:	69.8	68.4	59.3	60.6	68.9	69.1
Vehicle Noise:	72.4	70.8	65.8	62.9	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	134	288	620
CNEL:	65	140	302	650

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Amargosa Rd.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,086 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,209 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.95%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-1.74	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-19.08	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-15.12	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.0	66.1	64.3	58.2	66.9	67.5
Medium Trucks:	61.5	60.0	53.6	52.0	60.5	60.7
Heavy Trucks:	69.8	68.4	59.3	60.6	68.9	69.1
Vehicle Noise:	72.4	70.8	65.8	62.9	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	134	288	620
CNEL:	65	140	302	651

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Amargosa Rd.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,280 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,128 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-2.04	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-19.37	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-15.41	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.7	65.8	64.0	57.9	66.6	67.2
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.4
Heavy Trucks:	69.5	68.1	59.0	60.3	68.6	68.8
Vehicle Noise:	72.1	70.5	65.5	62.7	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	59	128	275	593
CNEL:	62	134	289	622

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Amargosa Rd.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,296 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,130 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.95%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-2.04	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-19.37	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-15.41	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.7	65.8	64.0	58.0	66.6	67.2
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.4
Heavy Trucks:	69.5	68.1	59.0	60.3	68.6	68.8
Vehicle Noise:	72.1	70.5	65.5	62.7	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	59	128	275	593
CNEL:	62	134	289	622

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,740 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	674 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-4.28	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-21.61	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-17.65	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.4	63.5	61.8	55.7	64.3	64.9
Medium Trucks:	58.9	57.4	51.1	49.5	58.0	58.2
Heavy Trucks:	67.3	65.8	56.8	58.1	66.4	66.5
Vehicle Noise:	69.8	68.2	63.2	60.4	68.9	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	42	91	195	421
CNEL:	44	95	205	441

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,590 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	759 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-3.76	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-21.09	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-17.13	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.9	64.0	62.3	56.2	64.8	65.5
Medium Trucks:	59.4	57.9	51.6	50.0	58.5	58.7
Heavy Trucks:	67.8	66.4	57.3	58.6	66.9	67.1
Vehicle Noise:	70.3	68.7	63.8	60.9	69.4	69.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	46	98	211	455
CNEL:	48	103	222	477

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,298 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.07%
Medium Trucks:	84.8%	4.9%	10.3%	1.83%
Heavy Trucks:	86.5%	2.7%	10.8%	5.11%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-3.42	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-20.49	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-16.03	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.3	64.4	62.6	56.6	65.2	65.8
Medium Trucks:	60.0	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	68.9	67.5	58.4	59.7	68.0	68.2
Vehicle Noise:	71.1	69.6	64.3	61.8	70.2	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	52	111	239	516
CNEL:	54	116	250	539

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,360 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	736 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-3.90	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-21.23	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-17.27	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.8	63.9	62.1	56.1	64.7	65.3
Medium Trucks:	59.3	57.8	51.4	49.9	58.4	58.6
Heavy Trucks:	67.6	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	70.2	68.6	63.6	60.8	69.3	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	45	96	207	446
CNEL:	47	101	217	468

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,068 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	807 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.04%
Medium Trucks:	84.8%	4.9%	10.3%	1.83%
Heavy Trucks:	86.5%	2.7%	10.8%	5.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-3.54	0.71	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	81.00	-20.61	0.74	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	85.38	-16.13	0.73	-1.20	*-5.43*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.2	64.3	62.5	56.5	65.1	65.7
Medium Trucks:	59.9	58.4	52.1	50.5	59.0	59.2
Heavy Trucks:	68.8	67.4	58.3	59.6	67.9	68.1
Vehicle Noise:	71.0	69.5	64.2	61.6	70.1	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	51	109	235	507
CNEL:	53	114	246	530

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Main St.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,330 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	3,233 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.12	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-15.21	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-11.25	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.2	71.3	69.5	63.4	72.1	72.7
Medium Trucks:	66.5	65.0	58.6	57.1	65.5	65.8
Heavy Trucks:	74.4	73.0	64.0	65.2	73.6	73.7
Vehicle Noise:	77.2	75.6	70.8	67.8	76.3	76.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	157	339	729	1,571
CNEL:	165	356	767	1,651

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Main St.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,250 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,425 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.48	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.85	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.89	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.5	72.6	70.9	64.8	73.4	74.0
Medium Trucks:	67.8	66.3	60.0	58.4	66.9	67.1
Heavy Trucks:	75.8	74.4	65.3	66.6	74.9	75.1
Vehicle Noise:	78.6	77.0	72.2	69.2	77.6	78.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	194	417	899	1,937
CNEL:	204	439	945	2,036

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Main St.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,274 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,427 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.48	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.85	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.89	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.5	72.6	70.9	64.8	73.4	74.0
Medium Trucks:	67.8	66.3	60.0	58.4	66.9	67.1
Heavy Trucks:	75.8	74.4	65.3	66.6	74.9	75.1
Vehicle Noise:	78.6	77.0	72.2	69.2	77.6	78.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	194	417	899	1,938
CNEL:	204	439	945	2,036

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Main St.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,730 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,173 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.22	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-14.10	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-10.15	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.3	72.4	70.6	64.5	73.2	73.8
Medium Trucks:	67.6	66.1	59.7	58.2	66.6	66.9
Heavy Trucks:	75.5	74.1	65.1	66.3	74.7	74.8
Vehicle Noise:	78.3	76.7	71.9	68.9	77.4	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	186	401	865	1,863
CNEL:	196	422	909	1,958

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Main St.
Road Segment: w/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,754 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,175 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.23	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-14.10	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-10.15	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.3	72.4	70.6	64.5	73.2	73.8
Medium Trucks:	67.6	66.1	59.7	58.2	66.6	66.9
Heavy Trucks:	75.5	74.1	65.1	66.3	74.7	74.8
Vehicle Noise:	78.3	76.7	71.9	68.9	77.4	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	186	401	865	1,863
CNEL:	196	422	909	1,958

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,250 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	2,325 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	0.68	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-16.64	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-12.69	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.7	69.8	68.1	62.0	70.6	71.2
Medium Trucks:	65.0	63.5	57.2	55.6	64.1	64.3
Heavy Trucks:	73.0	71.6	62.5	63.8	72.1	72.3
Vehicle Noise:	75.8	74.2	69.4	66.4	74.8	75.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	126	272	585	1,261
CNEL:	133	286	615	1,326

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,150 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	3,115 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.95	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-15.37	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-11.42	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.0	71.1	69.3	63.3	71.9	72.5
Medium Trucks:	66.3	64.8	58.4	56.9	65.4	65.6
Heavy Trucks:	74.3	72.8	63.8	65.1	73.4	73.5
Vehicle Noise:	77.1	75.5	70.7	67.6	76.1	76.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	153	330	712	1,533
CNEL:	161	347	748	1,611

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,818 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	3,182 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.70%
Medium Trucks:	84.8%	4.9%	10.3%	1.76%
Heavy Trucks:	86.5%	2.7%	10.8%	4.53%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.04	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-15.22	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-11.12	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.1	71.2	69.4	63.4	72.0	72.6
Medium Trucks:	66.5	65.0	58.6	57.1	65.5	65.7
Heavy Trucks:	74.6	73.1	64.1	65.4	73.7	73.8
Vehicle Noise:	77.3	75.7	70.8	67.9	76.3	76.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	158	341	734	1,582
CNEL:	166	358	771	1,661

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,250 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	2,725 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.37	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-15.95	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-12.00	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.4	70.5	68.7	62.7	71.3	71.9
Medium Trucks:	65.7	64.2	57.9	56.3	64.8	65.0
Heavy Trucks:	73.7	72.3	63.2	64.5	72.8	73.0
Vehicle Noise:	76.5	74.9	70.1	67.1	75.5	75.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	140	302	651	1,402
CNEL:	147	317	684	1,474

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,918 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	2,792 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.67%
Medium Trucks:	84.8%	4.9%	10.3%	1.77%
Heavy Trucks:	86.5%	2.7%	10.8%	4.56%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	1.47	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-15.78	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-11.66	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.5	70.6	68.8	62.8	71.4	72.0
Medium Trucks:	65.9	64.4	58.0	56.5	65.0	65.2
Heavy Trucks:	74.0	72.6	63.6	64.8	73.2	73.3
Vehicle Noise:	76.7	75.1	70.2	67.3	75.8	76.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	145	313	675	1,453
CNEL:	153	329	708	1,526

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,620 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	3,362 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	2.29	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-15.04	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-11.08	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	73.3	71.4	69.7	63.6	72.2	72.8
Medium Trucks:	66.6	65.1	58.8	57.2	65.7	65.9
Heavy Trucks:	74.6	73.2	64.1	65.4	73.7	73.9
Vehicle Noise:	77.4	75.8	71.0	68.0	76.4	76.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	161	348	749	1,613
CNEL:	170	365	787	1,695

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	42,950 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,295 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.35	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.98	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-10.02	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.4	72.5	70.7	64.7	73.3	73.9
Medium Trucks:	67.7	66.2	59.8	58.3	66.8	67.0
Heavy Trucks:	75.7	74.2	65.2	66.5	74.8	74.9
Vehicle Noise:	78.5	76.9	72.1	69.0	77.5	77.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	190	409	881	1,899
CNEL:	200	430	926	1,996

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	43,187 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,319 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.97%
Medium Trucks:	84.8%	4.9%	10.3%	1.73%
Heavy Trucks:	86.5%	2.7%	10.8%	4.30%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.37	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.98	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-10.02	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.4	72.5	70.7	64.7	73.3	73.9
Medium Trucks:	67.7	66.2	59.8	58.3	66.8	67.0
Heavy Trucks:	75.7	74.2	65.2	66.5	74.8	74.9
Vehicle Noise:	78.5	76.9	72.1	69.1	77.5	77.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	190	410	883	1,902
CNEL:	200	431	928	1,999

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,990 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,199 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.25	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-14.08	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-10.12	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.3	72.4	70.6	64.6	73.2	73.8
Medium Trucks:	67.6	66.1	59.7	58.2	66.7	66.9
Heavy Trucks:	75.6	74.1	65.1	66.4	74.7	74.8
Vehicle Noise:	78.4	76.8	72.0	68.9	77.4	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	187	403	868	1,871
CNEL:	197	424	912	1,966

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps

Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	42,227 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,223 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	93.97%
Medium Trucks:	84.8%	4.9%	10.3%	1.73%
Heavy Trucks:	86.5%	2.7%	10.8%	4.30%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.78	3.28	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-14.08	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-10.12	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	74.3	72.4	70.7	64.6	73.2	73.8
Medium Trucks:	67.6	66.1	59.7	58.2	66.7	66.9
Heavy Trucks:	75.6	74.1	65.1	66.4	74.7	74.8
Vehicle Noise:	78.4	76.8	72.0	69.0	77.4	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	187	404	870	1,874
CNEL:	197	424	914	1,969

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APPENDIX 9.1:

CADNAA OPERATIONAL NOISE CALCULATIONS

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14848 - Palmeto Industrial

CadnaA Noise Prediction Model: 14848-03_Operation.cna
Date: 11.03.26
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (ft)	**6561.70**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (ft)	**3280.80**
Min. Length of Section (ft)	**3.30**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**328.08**
Search Radius Rcvr	**328.08**
Max. Distance Source - Rcvr	**3280.84 3280.84**
Min. Distance Rvcr - Reflector	**3.28 3.28**
Min. Distance Source - Reflector	**0.33**
Industrial (ISO 9613 (1996))	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (°F)	**50**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (mph)	**6.7**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)	
R1		R1	32.2	30.9	37.4	60.0	55.0	0.0				5.00	r	6221305.09	2468653.38	5.00	
R2		R2	39.7	38.7	45.1	60.0	55.0	0.0				5.00	r	6222005.62	2468653.38	5.00	
R3		R3	31.2	30.1	36.5	60.0	55.0	0.0				5.00	r	6224255.62	2468671.61	5.00	
R4		R4	33.8	32.7	39.1	60.0	55.0	0.0				5.00	r	6223760.69	2467691.18	5.00	
R5		R5	35.4	34.2	40.7	60.0	55.0	0.0				5.00	r	6220761.76	2468813.86	5.00	

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6222236.61	2468073.83	51.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6222193.59	2468072.78	51.00
POINTSOURCE		TRASH03	89.0	89.0	89.0	Lw	89		150.00	0.00	90.00	5.00	r	6222081.89	2468544.32	5.00
POINTSOURCE		CAR04	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222350.04	2468162.16	5.00
POINTSOURCE		CAR05	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222299.42	2468164.31	5.00
POINTSOURCE		CAR06	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222411.96	2468162.85	5.00
POINTSOURCE		CAR07	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220808.20	2468176.21	5.00
POINTSOURCE		CAR08	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222475.79	2468231.84	5.00
POINTSOURCE		CAR09	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222412.03	2468307.57	5.00
POINTSOURCE		CAR10	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222350.05	2468308.69	5.00
POINTSOURCE		CAR11	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222350.26	2468235.36	5.00
POINTSOURCE		CAR12	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222413.15	2468233.62	5.00
POINTSOURCE		CAR13	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222475.02	2468160.68	5.00
POINTSOURCE		CAR14	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220844.25	2468096.36	5.00
POINTSOURCE		CAR15	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220807.83	2468241.24	5.00

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		CAR16	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222476.47	2468306.52	5.00
POINTSOURCE		CAR17	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222413.08	2468360.12	5.00
POINTSOURCE		CAR18	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222351.28	2468360.55	5.00
POINTSOURCE		CAR19	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222337.94	2468086.45	5.00
POINTSOURCE		CAR20	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222422.01	2468084.54	5.00
POINTSOURCE		CAR21	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222520.49	2468206.73	5.00
POINTSOURCE		CAR22	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220809.91	2468293.10	5.00
POINTSOURCE		CAR23	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222299.49	2468117.16	5.00
POINTSOURCE		CAR24	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222299.42	2468212.50	5.00
POINTSOURCE		CAR25	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222299.42	2468277.56	5.00
POINTSOURCE		CAR26	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222301.95	2468325.69	5.00
POINTSOURCE		CAR27	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222301.95	2468382.35	5.00
POINTSOURCE		CAR28	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222476.98	2468359.19	5.00
POINTSOURCE		CAR29	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222376.93	2468414.82	5.00
POINTSOURCE		CAR30	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222449.90	2468417.67	5.00
POINTSOURCE		CAR31	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6222521.50	2468322.16	5.00
POINTSOURCE		CAR32	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220811.74	2468375.37	5.00
POINTSOURCE		CAR33	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220852.04	2468375.27	5.00
POINTSOURCE		CAR34	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220852.73	2468294.01	5.00
POINTSOURCE		CAR35	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220853.08	2468240.87	5.00
POINTSOURCE		CAR36	81.1	81.1	81.1	Lw	81.1		900.00	0.00	540.00	5.00	r	6220847.89	2468178.00	5.00
POINTSOURCE		AC37	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6220955.14	2468081.42	51.00
POINTSOURCE		AC38	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6220912.12	2468080.37	51.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	93.2	93.2	93.2	64.0	64.0	64.0	Lw	93.2		900.00	0.00	540.00					8	r
LINESOURCE		TRUCK02	93.2	93.2	93.2	70.0	70.0	70.0	Lw	93.2		900.00	0.00	540.00					8	r
LINESOURCE		TRUCK03	93.2	93.2	93.2	69.3	69.3	69.3	Lw	93.2		900.00	0.00	540.00					8	r

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	r			6220408.31	2468084.49	8.00	0.00
						6220420.19	2468003.66	8.00	0.00
						6220431.71	2467971.88	8.00	0.00
						6220445.48	2467925.91	8.00	0.00
						6220574.79	2467946.60	8.00	0.00
						6220714.56	2467953.62	8.00	0.00
						6221789.31	2467947.40	8.00	0.00
						6222137.72	2467947.09	8.00	0.00
						6222289.45	2467963.50	8.00	0.00
						6222458.91	2468004.71	8.00	0.00
						6222640.56	2468078.75	8.00	0.00
						6222808.40	2468180.29	8.00	0.00
						6222868.70	2468226.49	8.00	0.00
						6222911.12	2468183.63	8.00	0.00
LINESOURCE	TRUCK02	8.00	r			6220755.55	2467957.18	8.00	0.00
						6220774.63	2468423.90	8.00	0.00
						6220795.46	2468470.77	8.00	0.00
						6220853.62	2468482.06	8.00	0.00
						6220957.79	2468469.04	8.00	0.00
LINESOURCE	TRUCK03	8.00	r			6222111.43	2468472.51	8.00	0.00
						6222430.01	2468470.77	8.00	0.00
						6222529.83	2468446.47	8.00	0.00
						6222661.96	2468275.65	8.00	0.00
						6222746.43	2468140.06	8.00	0.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		DOCK01	68.6	68.6	68.6	25.6	25.6	25.6	Lw	68.6		900.00	0.00	540.00	8	r
AREASOURCE		TRAILER01	60.7	60.7	60.7	19.4	19.4	19.4	Lw	60.7		900.00	0.00	540.00	8	r

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
AREASOURCE	DOCK01	8.00	r			6220980.90	2468570.32	8.00	0.00
						6222111.07	2468565.07	8.00	0.00
						6222112.12	2468505.26	8.00	0.00
						6222112.37	2468375.03	8.00	0.00
						6222006.13	2468378.28	8.00	0.00

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
						6220978.80	2468381.43	8.00	0.00
						6220982.99	2468509.45	8.00	0.00
AREASOURCE	TRAILER01	8.00	r			6220683.34	2468573.64	8.00	0.00
						6220980.90	2468570.32	8.00	0.00
						6220981.74	2468471.17	8.00	0.00
						6220861.29	2468470.77	8.00	0.00
						6220828.73	2468462.96	8.00	0.00
						6220800.96	2468451.24	8.00	0.00
						6220781.25	2468431.89	8.00	0.00
						6220788.20	2468147.86	8.00	0.00
						6220786.81	2468095.77	8.00	0.00
						6220759.03	2468095.77	8.00	0.00
						6220702.78	2468095.08	8.00	0.00
						6220700.00	2468039.52	8.00	0.00
						6220453.47	2468042.30	8.00	0.00
						6220453.47	2468101.33	8.00	0.00
						6220432.64	2468103.41	8.00	0.00
						6220432.64	2468094.39	8.00	0.00
						6220339.12	2468090.91	8.00	0.00
						6220332.22	2468225.62	8.00	0.00
						6220390.96	2468226.20	8.00	0.00
						6220393.06	2468279.11	8.00	0.00
						6220680.73	2468278.50	8.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height			Coordinates			
				left	right		horz.	vert.	Begin		End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERPLANNED			BARRIER01						14.00	r		6222112.12	2468505.26	14.00	0.00
												6222111.07	2468565.07	14.00	0.00
												6220683.34	2468573.64	14.00	0.00
												6220683.11	2468548.51	14.00	0.00

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinates			
							Begin		x	y	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING01	x	0		46.00	r	6220868.68	2468441.13	46.00	0.00
									6220983.95	2468440.62	46.00	0.00
									6220984.64	2468384.66	46.00	0.00
									6222111.72	2468372.16	46.00	0.00
									6222112.43	2468435.53	46.00	0.00
									6222265.40	2468434.84	46.00	0.00
									6222261.20	2468029.78	46.00	0.00
									6222114.29	2468023.49	46.00	0.00
									6221981.86	2468024.25	46.00	0.00
									6221121.44	2468032.58	46.00	0.00
									6220984.92	2468034.65	46.00	0.00
									6220876.03	2468032.93	46.00	0.00
									6220870.78	2468089.60	46.00	0.00

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)											Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

RoadsGeo

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		

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APPENDIX 10.1:

CONSTRUCTION NOISE CALCULATIONS

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14848 - Palmeto Industrial

CadnaA Noise Prediction Model: 14848-03_Construction.cna
Date: 11.03.26
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (ft)	**6561.70**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (ft)	**3280.80**
Min. Length of Section (ft)	**3.30**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**328.08**
Search Radius Rcvr	**328.08**
Max. Distance Source - Rcvr	**3280.84 3280.84**
Min. Distance Rvcr - Reflector	**3.28 3.28**
Min. Distance Source - Reflector	**0.33**
Industrial (ISO 9613 (1996))	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (°F)	**50**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (mph)	**6.7**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)	
R1		R1	67.3	-39.7	64.3	80.0	0.0	0.0				5.00	r	6221305.09	2468653.38	5.00	
R2		R2	67.1	-39.9	64.1	80.0	0.0	0.0				5.00	r	6222005.62	2468653.38	5.00	
R3		R3	52.7	-54.3	49.7	80.0	0.0	0.0				5.00	r	6224255.62	2468671.61	5.00	
R4		R4	54.7	-52.3	51.7	80.0	0.0	0.0				5.00	r	6223760.69	2467691.18	5.00	
R5		R5	63.5	-43.5	60.5	80.0	0.0	0.0				5.00	r	6220761.76	2468813.86	5.00	

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
CA1		CA1	122.6	15.6	15.6	71.3	-35.7	-35.7	PWL-Pt	115.6					8	r

Name	ID	Height			Coordinates			
		Begin		End	x	y	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
CA1	CA1	8.00	r		6220330.99	2468589.92	8.00	0.00
					6222996.82	2468570.58	8.00	0.00
					6222995.76	2468420.93	8.00	0.00
					6222959.73	2468380.23	8.00	0.00
					6222921.90	2468341.21	8.00	0.00
					6222882.34	2468303.93	8.00	0.00
					6222841.13	2468268.49	8.00	0.00
					6222798.36	2468234.95	8.00	0.00
					6222754.12	2468203.38	8.00	0.00
					6222708.49	2468173.85	8.00	0.00
					6222661.57	2468146.41	8.00	0.00
					6222613.45	2468121.12	8.00	0.00
					6222564.25	2468098.04	8.00	0.00
					6222514.04	2468077.21	8.00	0.00
					6222462.95	2468058.68	8.00	0.00
					6222416.45	2468044.04	8.00	0.00
					6222369.41	2468031.30	8.00	0.00
					6222321.88	2468020.49	8.00	0.00
					6222273.95	2468011.62	8.00	0.00
					6222225.71	2468004.69	8.00	0.00
					6222177.22	2467999.74	8.00	0.00
					6222128.57	2467996.76	8.00	0.00
					6220865.00	2468002.77	8.00	0.00
					6220805.40	2468005.36	8.00	0.00
					6220745.74	2468005.80	8.00	0.00
					6220686.11	2468004.07	8.00	0.00
					6220626.58	2468000.19	8.00	0.00
					6220567.22	2467994.15	8.00	0.00
					6220508.13	2467985.96	8.00	0.00
					6220449.37	2467975.64	8.00	0.00
					6220391.02	2467963.20	8.00	0.00
					6220333.16	2467948.66	8.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates			
							Begin	x	y	z	Ground
							(ft)	(ft)	(ft)	(ft)	(ft)

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height			Coordinates			
		Begin		End	x	y	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

RoadsGeo

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		

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APPENDIX 10.2:

NIGHTTIME CONCRETE POUR NOISE CALCULATIONS

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14848 - Palmeto Industrial

CadnaA Noise Prediction Model: 14848-03_Concrete.cna
Date: 11.03.26
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (ft)	**6561.70**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (ft)	**3280.80**
Min. Length of Section (ft)	**3.30**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**328.08**
Search Radius Rcvr	**328.08**
Max. Distance Source - Rcvr	**3280.84 3280.84**
Min. Distance Rvcr - Reflector	**3.28 3.28**
Min. Distance Source - Reflector	**0.33**
Industrial (ISO 9613 (1996))	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (°F)	**50**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (mph)	**6.7**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	43.6	43.6	50.3	60.0	55.0	0.0				5.00	r	6221305.09	2468653.38	5.00
R2		R2	43.3	43.3	50.0	60.0	55.0	0.0				5.00	r	6222005.62	2468653.38	5.00
R3		R3	29.5	29.5	36.2	60.0	55.0	0.0				5.00	r	6224255.62	2468671.61	5.00
R4		R4	31.5	31.5	38.2	60.0	55.0	0.0				5.00	r	6223760.69	2467691.18	5.00
R5		R5	39.5	39.5	46.2	60.0	55.0	0.0				5.00	r	6220761.76	2468813.86	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
BUILDING		BUILDING01	100.3	100.3	100.3	53.6	53.6	53.6	Lw	100.3					8	r

Name	ID	Height			Coordinates			
		Begin		End	x	y	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BUILDING	BUILDING01	8.00	r		6220868.68	2468441.13	8.00	0.00
					6220983.95	2468440.62	8.00	0.00
					6220984.64	2468384.66	8.00	0.00
					6222111.72	2468372.16	8.00	0.00
					6222112.43	2468435.53	8.00	0.00
					6222265.40	2468434.84	8.00	0.00
					6222261.20	2468029.78	8.00	0.00
					6222114.29	2468023.49	8.00	0.00
					6221981.86	2468024.25	8.00	0.00
					6221121.44	2468032.58	8.00	0.00
					6220984.92	2468034.65	8.00	0.00
					6220876.03	2468032.93	8.00	0.00
					6220870.78	2468089.60	8.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates				
							Begin	x	y	z	Ground	
							(ft)	(ft)	(ft)	(ft)	(ft)	

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)											Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

RoadsGeo

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		

Appendix K – Traffic Analysis

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE REVISED TRAFFIC IMPACT ANALYSIS

City of Hesperia

August 21, 2025

gandini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE REVISED TRAFFIC IMPACT ANALYSIS

City of Hesperia

August 21, 2025

prepared by

Bryan Crawford
Giancarlo Ganddini, PE, PTP

GANDDINI GROUP, INC.
555 Parkcenter Drive, Suite 225
Santa Ana, California 92705
714.795.3100 | ganddini.com

Project No. 19522

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EXECUTIVE SUMMARY

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The currently vacant site is proposed to be developed with a 499,850 square foot high-cube fulfillment center warehouse building. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2027.

The initial traffic impact analysis (TIA) for this proposed development was completed on August 18, 2022. The TIA was revised on February 10, 2023 to include a trip generation comparison analysis. Comments were received from TKE Engineering based on a review of the August 2022 TIA dated January 9, 2025. The comments can be summarized as stating that the August 2022 TIA needed to be updated to present day conditions. This revised TIA updates the August 2022 and February 2023 TIA's to current conditions based on the review comments from TKE Engineering.

Project Trip Generation

The proposed project is forecast to generate 1,083 daily Passenger Car Equivalents (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

Levels of Service

The study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

Vehicle Miles Traveled (VMT) Analysis

Based on review of the SBCTA VMT Screening Tool, the proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

1. INTRODUCTION

This section describes the purpose of this study and the project description. Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with technical terms related to transportation engineering and planning.

This section describes the purpose of this traffic impact analysis, project location, proposed development, and study area.

PURPOSE AND OBJECTIVES

The purpose of this traffic impact analysis is to assess potential transportation impacts resulting from development of the proposed project both in the context of the California Environmental Quality Act (CEQA) and City of Hesperia discretionary authority. This study has been prepared in consultation with the City of Hesperia as documented in Appendix B.

For CEQA purposes, this study evaluates the significance of project-related transportation impacts with respect to vehicle miles traveled (VMT) thresholds established by the City of Hesperia, as the lead agency, and identifies the appropriate measures to mitigate such impacts, if any. This study also evaluates non-CEQA impacts and the need for corrective measures, if necessary, relating to General Plan Level of Service standards.

HISTORICAL CONTEXT

The initial traffic impact analysis (TIA) for this proposed development was completed on August 18, 2022. The TIA was revised on February 10, 2023 to include a trip generation comparison analysis. Comments were received from TKE Engineering based on a review of the August 2022 TIA dated January 9, 2025. The comments can be summarized as stating that the August 2022 TIA needed to be updated to present day conditions. This revised TIA updates the August 2022 and February 2023 TIA's to current conditions based on the review comments from TKE Engineering.

PROJECT DESCRIPTION

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. Figure 1 shows the project location map.

The currently vacant site is proposed to be developed with a 499,714 square foot high-cube fulfillment center warehouse building. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2027. Figure 2 illustrates the project site plan.

STUDY AREA

Based on the study intersections identified in the approved scoping agreement (Appendix B), the study area consists of the following study intersections within the City of Hesperia and California Department of Transportation jurisdictions:

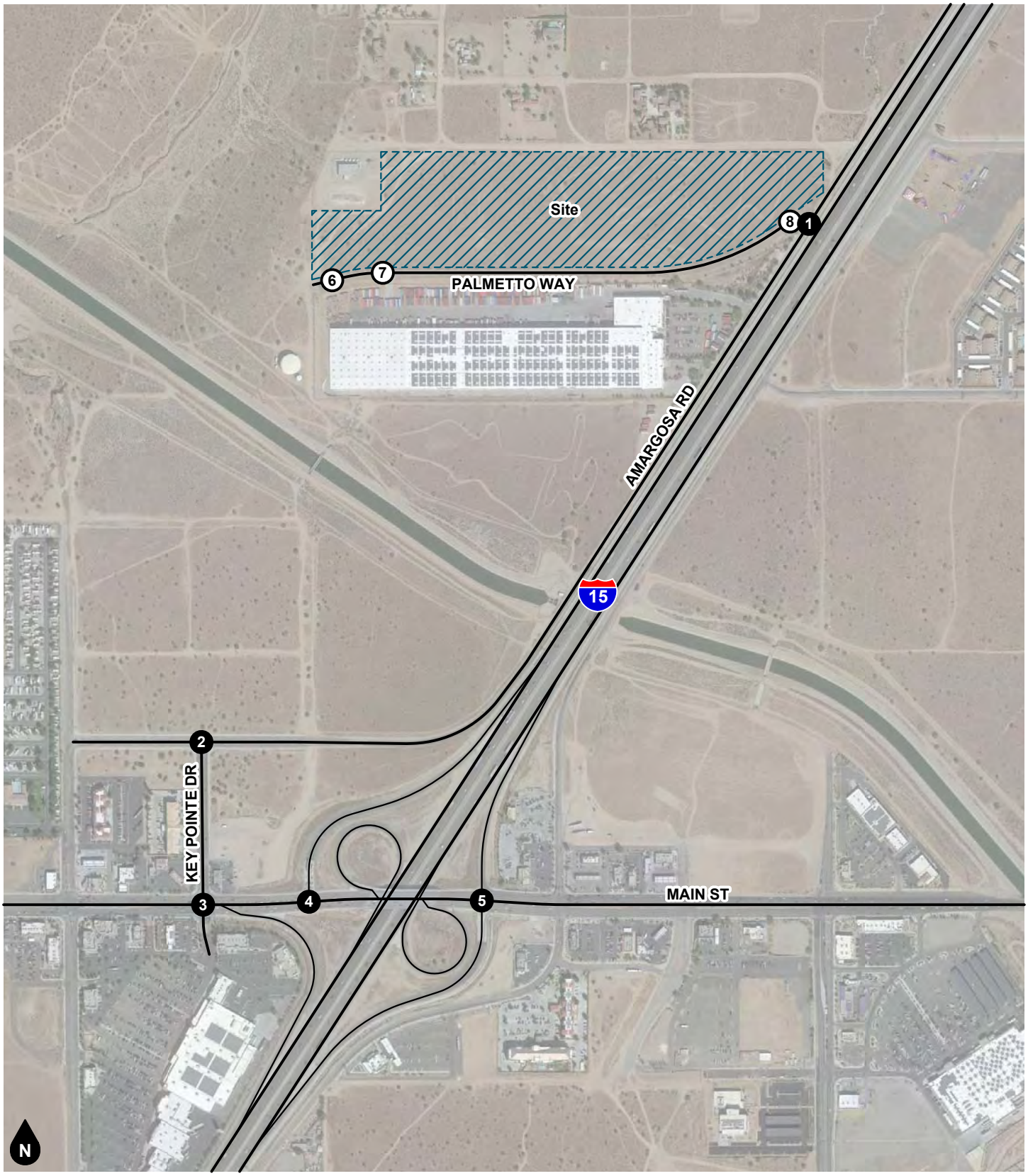
Study Intersections[1]	Jurisdiction
1. Amargosa Road (NS) at Palmetto Way (EW)	City of Hesperia
2. Key Pointe Drive (NS) at Amargosa Road (EW)	City of Hesperia
3. Key Pointe Drive (NS) at Main Street (EW)	City of Hesperia
4. I-15 SB Offramp (NS) at Main Street (EW)	Caltrans[2]
5. I-15 NB Ramps (NS) at Main Street (EW)	Caltrans[2]
6. Project West Driveway (NS) at Palmetto Way (EW)	City of Hesperia
7. Project Central Driveway (NS) at Palmetto Way (EW)	City of Hesperia
8. Project East Driveway (NS) at Palmetto Way (EW)	City of Hesperia

ANALYSIS SCENARIOS

The following scenarios are analyzed during typical weekday AM and PM peak hour conditions:

- Existing
- Opening Year (2027) Without Project
- Opening Year (2027) With Project
- General Plan Buildout (2040) Without Project
- General Plan Buildout (2040) With Project

[1] (NS) = north-south roadway; (EW) = east-west roadway; NB = Northbound; SB = Southbound
[2] Caltrans = California Department of Transportation



Legend

(#) Study Intersection

(#) Project Driveway

Figure 1
Project Location Map

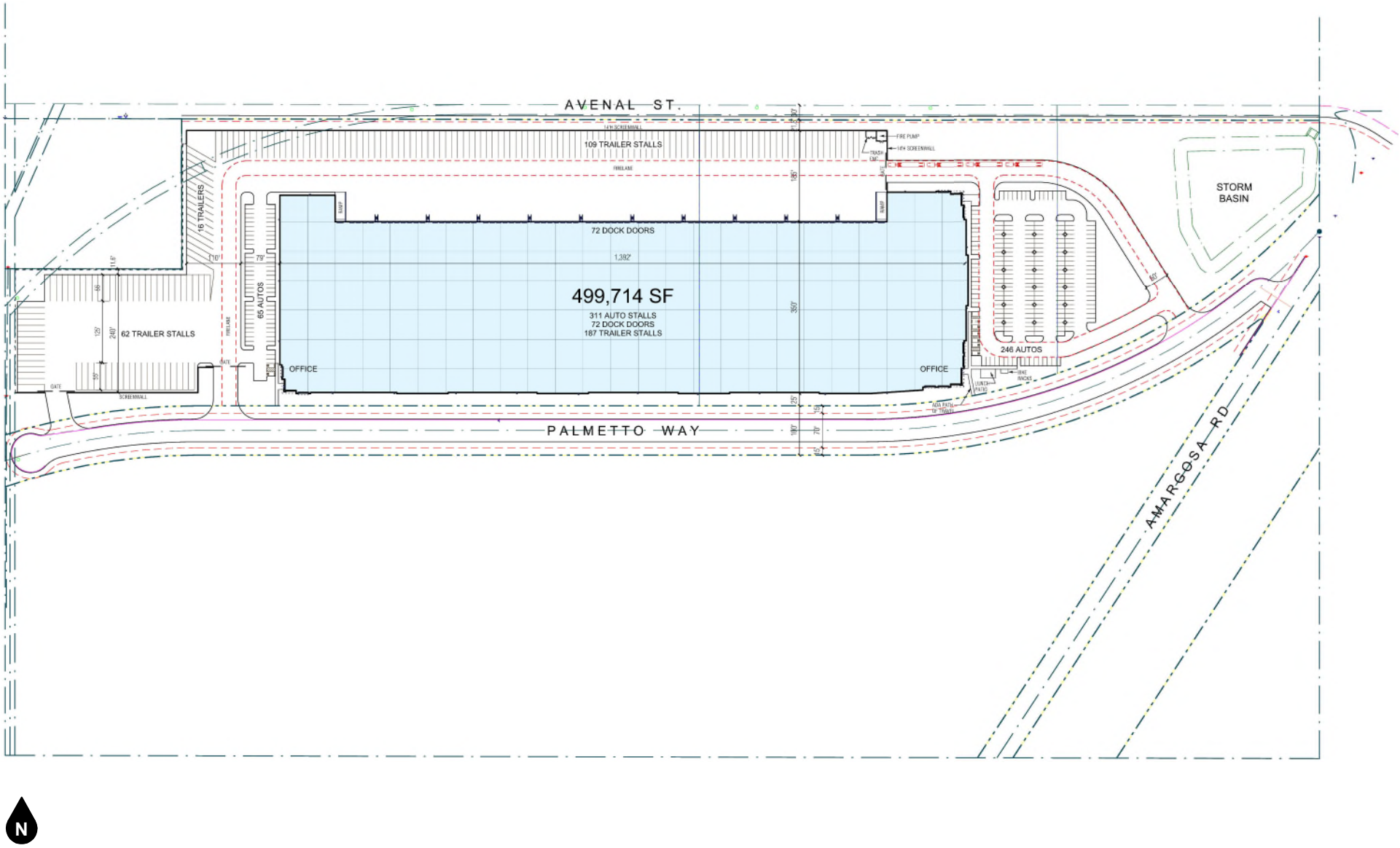


Figure 2
Site Plan

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies. This traffic impact analysis was conducted in accordance with the guidelines established within the City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020).

LEVEL OF SERVICE/GENERAL PLAN CONFORMANCE (NON-CEQA)

Intersection Delay Methodology

The technique used to assess the performance of intersections is known as the intersection delay methodology based on the procedures contained in the *Highway Capacity Manual* (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

In accordance with City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020), Existing and future conditions were analyzed using optimized signal timing between 60-130 seconds, 10 second minimum phase time, two seconds of lost time per critical phase, and Passenger Car Equivalent (PCE) factors of 1.5 for 2-axle, 2.0 for 3-axle, and 3.0 for 4+-axle. The following saturation flow rates were utilized for existing and opening year:

- 1,800 vehicles per hour for exclusive thru and exclusive right turn lanes
- 1,700 vehicles per hour for exclusive left turn lanes
- 1,600 vehicles per hour for exclusive dual left turn lanes
- 1,500 vehicles per hour for exclusive triple left turn lanes

For future scenarios (Future Year 2040) a peak hour factor of 0.95 was used along with the following saturation flow rates:

- 1,900 vehicles per hour for exclusive thru and exclusive right turn lanes
- 1,800 vehicles per hour for exclusive double right turn lanes
- 1,800 vehicles per hour for exclusive left turn lanes
- 1,700 vehicles per hour for exclusive dual left turn lanes
- 1,600 vehicles per hour for exclusive triple left turn lanes

Intersection delay analysis was performed using the Vistro software.

Performance Standards

City of Hesperia. The City of Hesperia has established LOS D as the minimum acceptable Level of Service along all City maintained roads (including intersections).

California Department of Transportation. As stated in the Guide for the Preparation of Traffic Impact Studies (State of California, 2002), "California Department of Transportation endeavors to maintain a target LOS [Level of Service] at the transition between LOS "C" and LOS "D" on State highway facilities". The California Department of Transportation acknowledges this may not always be feasible and recommends consultation with the California Department of Transportation to determine the appropriate target Level of Service. For consistency with local requirements, this analysis defines Level of Service D as the minimum acceptable Level of Service for State Highway facilities.

Requirements for Improvements

City of Hesperia. For study intersections within the City of Hesperia jurisdiction, a traffic impact occurs if:

- The addition of peak hour project generated trips is forecast to cause an intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of peak hour project generated trips worsens the delay at an intersection operating at an unacceptable Level of Service (E or F) in the baseline condition.

If a project is forecast to cause an operational traffic impact, feasible improvements that will reduce the impact to an acceptable LOS are identified. Improvements can be in many forms, including the addition of lanes, traffic control modification, or demand management measures.

California Department of Transportation. Based on the established performance standards for City of Hesperia a potentially operational transportation impact is defined to occur if:

- The addition of project-generated trips is forecast to cause the performance of a study intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of project generated trips is forecast to worsen the performance of a study intersection operating at unacceptable Level of Service (E or F) in the baseline condition.

VEHICLE MILES TRAVELED METHODOLOGY (CEQA)

The methodology used to evaluate the impact of land use and transportation projects under CEQA is known as vehicle miles traveled (VMT). In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Additional information and a project assessment is provided in the "Vehicle Miles Traveled" section presented later in this report.

3. EXISTING CONDITIONS

EXISTING ROADWAY SYSTEM

Figure 3 identifies the lane geometry and intersection traffic controls for Existing conditions based on a field survey of the study area. Regional access to the project site is provided by the I-15 Freeway located adjacent to the project site to the east. Key roadways providing local circulation include Key Pointe Drive, Amargosa Road, Palmetto Way, and Main Street.

GENERAL PLAN CONTEXT

Figure 4 shows the City of Hesperia General Plan Circulation Element roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Hesperia standard roadway cross-sections are illustrated on Figure 5.

TRANSIT SERVICE

Figure 7 shows Existing public transit facilities and routes in the project vicinity. As shown on Figure 6, the study area is currently served by Victor Valley Transit Routes 20 and 114 along Amargosa Road adjacent to the project site.

BICYCLE FACILITIES

The City of Hesperia Non-Motorized Transportation Plan is illustrated on Figure 7. This plan shows existing and proposed bike paths within the City of Hesperia. There are currently no existing bike routes adjacent to the project site. Main Street east of the I-15 Freeway is classified as a Class I Bike Path.

EXISTING PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project vicinity are shown on Figure 8. Sidewalks are not provided on Amargosa Road adjacent to the project site.

TRUCK ROUTES

The City of Hesperia truck routes are shown on Figure 9. The City of Victorville General Plan does not identify Amargosa Road south of Bear Valley Road to the project site as a truck route.

EXISTING ROADWAY VOLUMES

Existing peak hour traffic conditions are based upon morning peak period and evening peak period intersection turning movement counts obtained in May 2022 during typical weekday conditions. The weekday morning peak period was counted between 7:00 AM and 9:00 AM, and the weekday evening peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix C. Figure 10 and Figure 11 show the Existing AM and PM peak hour intersection turning movement volumes.

Since the initial traffic counts were conducted in 2022, these traffic counts were increased by an ambient growth rate of 2.0% per year over three years (1.061% total) to reflect existing 2025 conditions.

EXISTING LEVEL OF SERVICE

The intersection Levels of Service for Existing conditions have been calculated and are shown in Table 1. Detailed intersection Level of Service worksheets are provided in Appendix C.

As shown in Table 1, the study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

Table 1
Existing Intersection Levels of Service

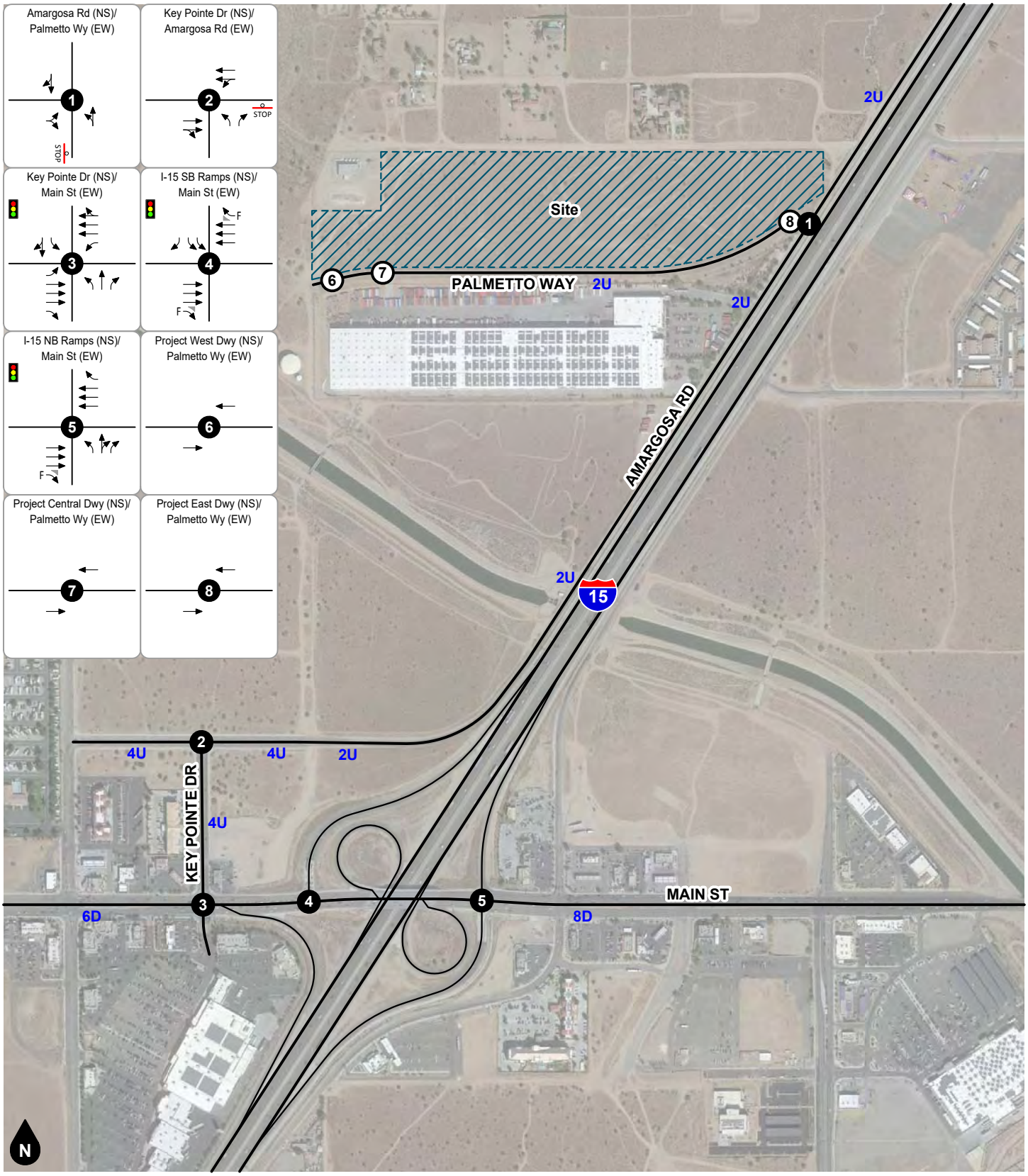
Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	8.8	A	9.7	A
3. Key Pointe Drive (NS) at Main Street (EW)	TS	15.1	B	24.2	C
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	8.4	A	11.2	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	4.3	A	12.9	B

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

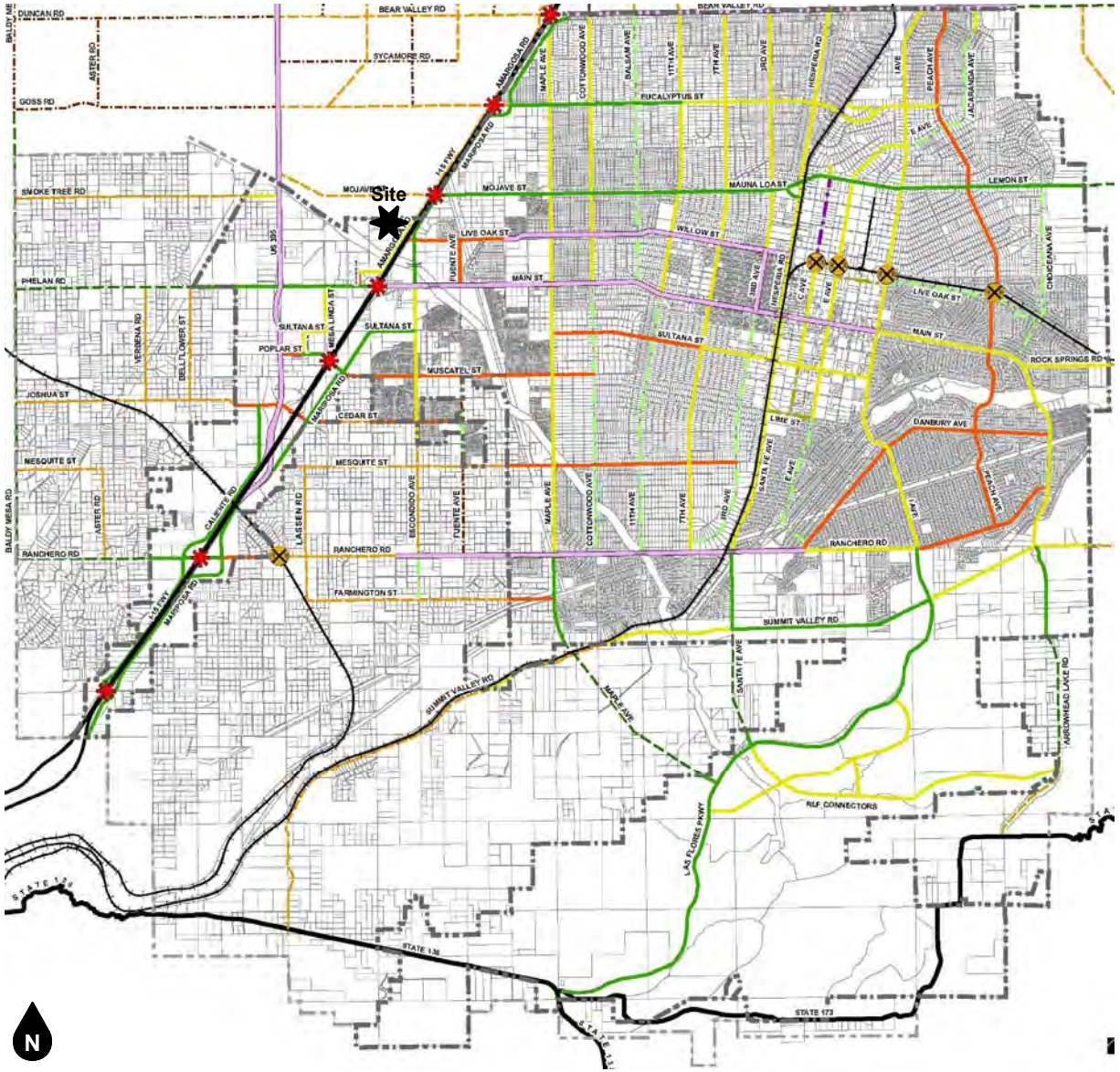
(3) LOS = Level of Service



Legend

- Traffic Signal
- Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- F Free Right Turn Lane

Figure 3
Existing Lane Geometry and Intersection Traffic Controls



Arterials

	(RoW)	(Curb-Curb)
Major Arterial	(120')	(104')* (92')**
Arterial	(100')	(72')
Secondary Arterial	(80')	(50')
Industrial Collector	(70')	(46')**
Suburban Collector	(60')	(36')**
Rural Collector	(60')	(48')* (40')**

* with bike lane
** without bike lane

Streets Outside City

- Major Arterial
- Arterial
- Colllector

Misc.

- City Boundary
- Sphere of Influence
- Railroad
- At Grade Crossing
- Bridge/overcrossing/undercrossing
- Freeway Interchange

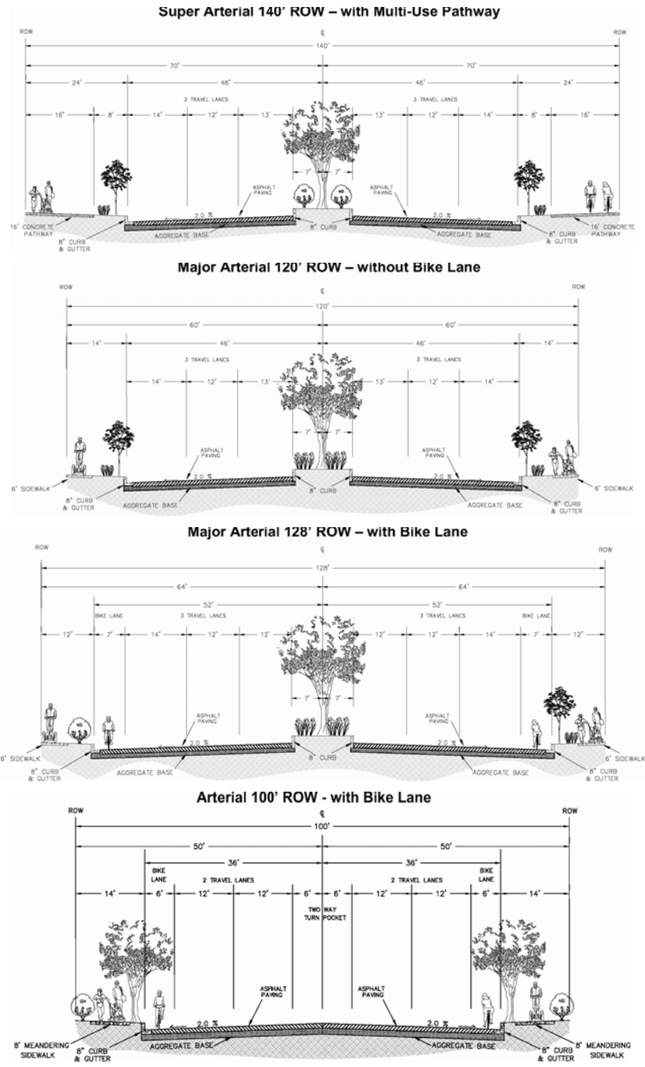
Special Street Section

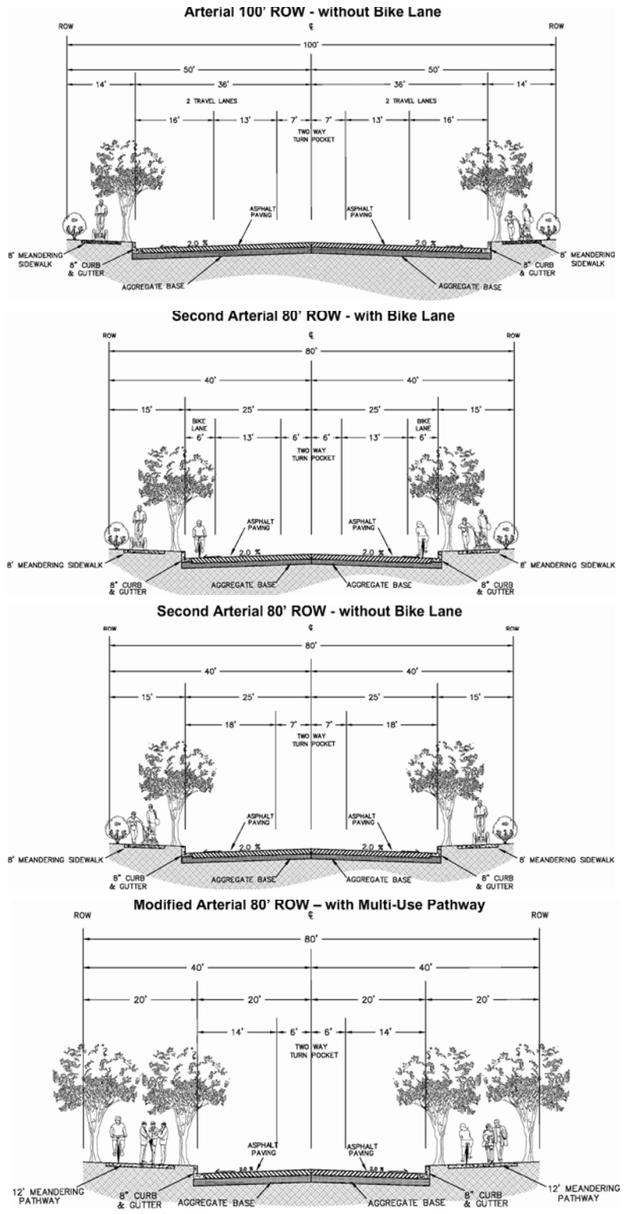
- Special Street

	(RoW)	(Curb-Curb)
Ranchero Road	(140')	(92')
Highway 395	(130')	(106')
Bear Valley Road (halfwidth)	(64')	(45')
Enhanced 3rd Avenue	(100')	(76')
Main Street Corridor "A"	(120')	(88')
Main Street Corridor "B"	(105')	(70')
Modified Live Oak-Willow St	(80')	(40')

Figure 4
City of Hesperia General Plan Circulation Element

Source: City of Hesperia





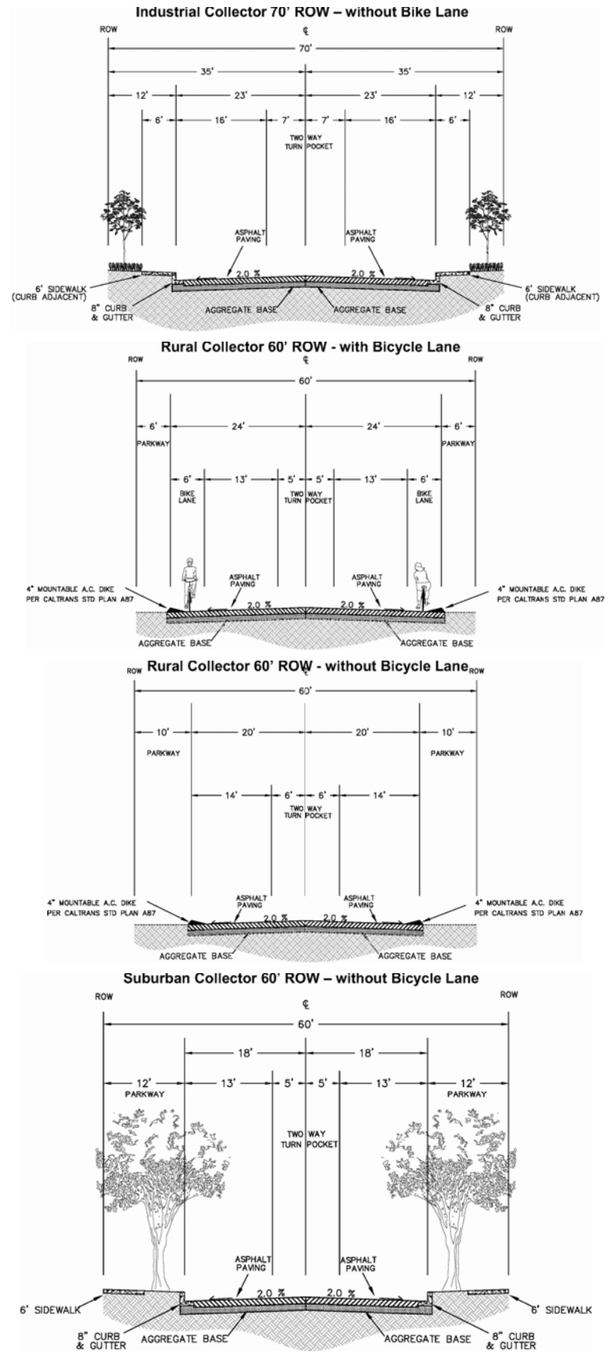
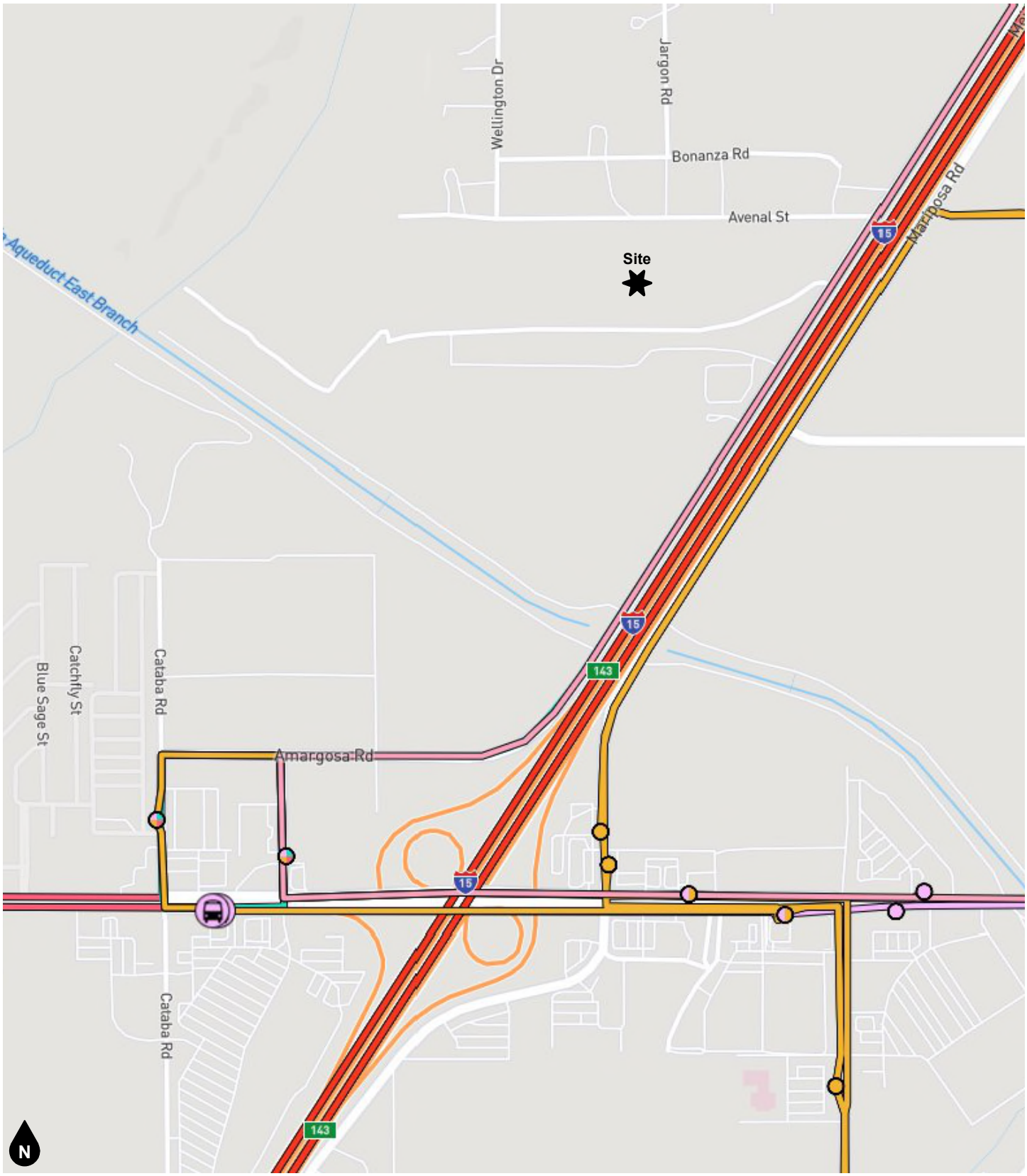


Figure 5
City of Hesperia General Plan Roadway Cross-Sections

Source: City of Hesperia



114 Fort Irwin - Hesperia
64 Hesperia Post Office - Super Target
68 Hesperia Post Office - Super Target
20 Hesperia Super Target - Pinon Hills
15 Barstow - Victorville - San Benrardino
21 Hesperia Super Target - Wrightwood

Figure 6
Victory Valley Transit Routes

Source: Victor Valley Transit

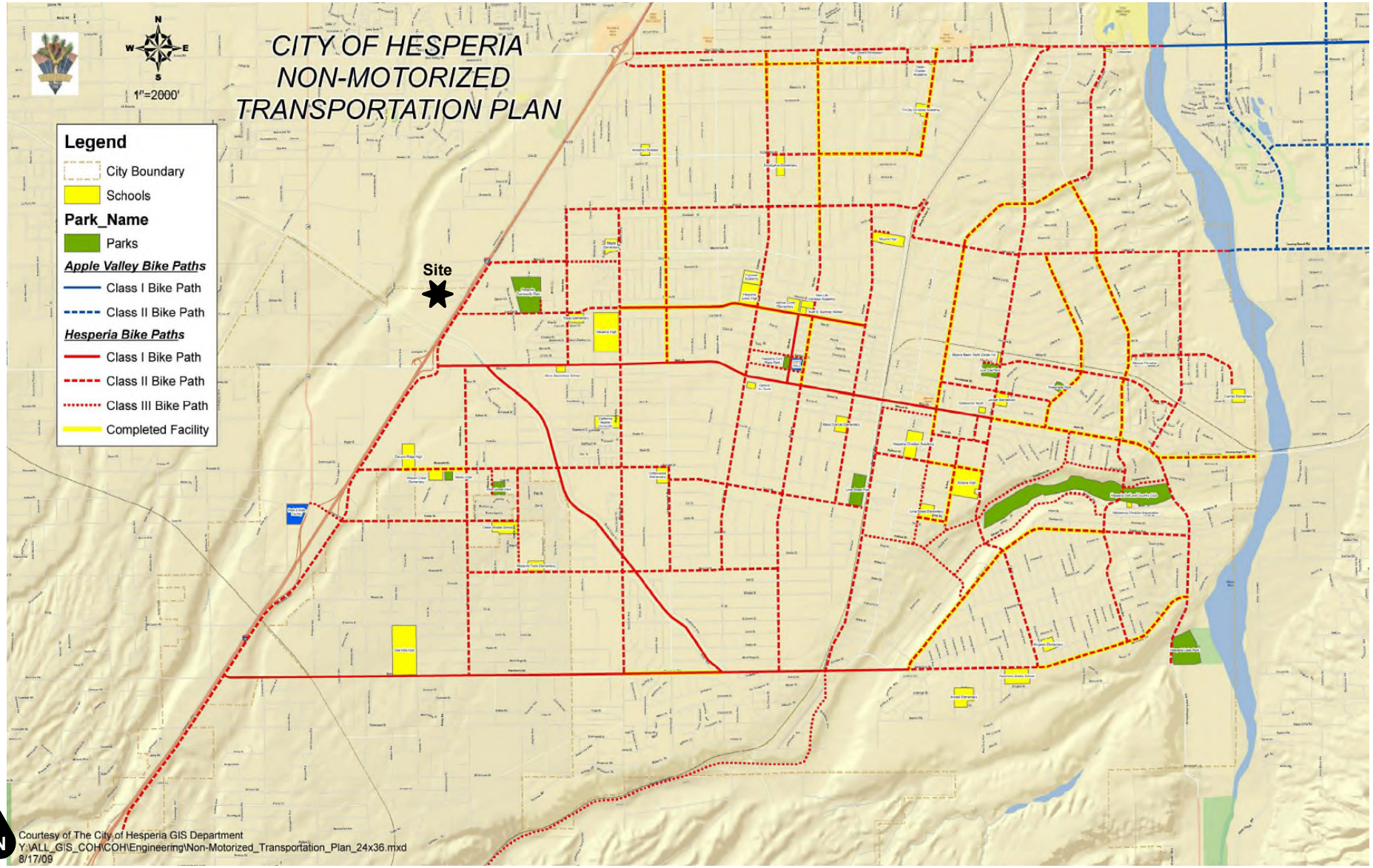
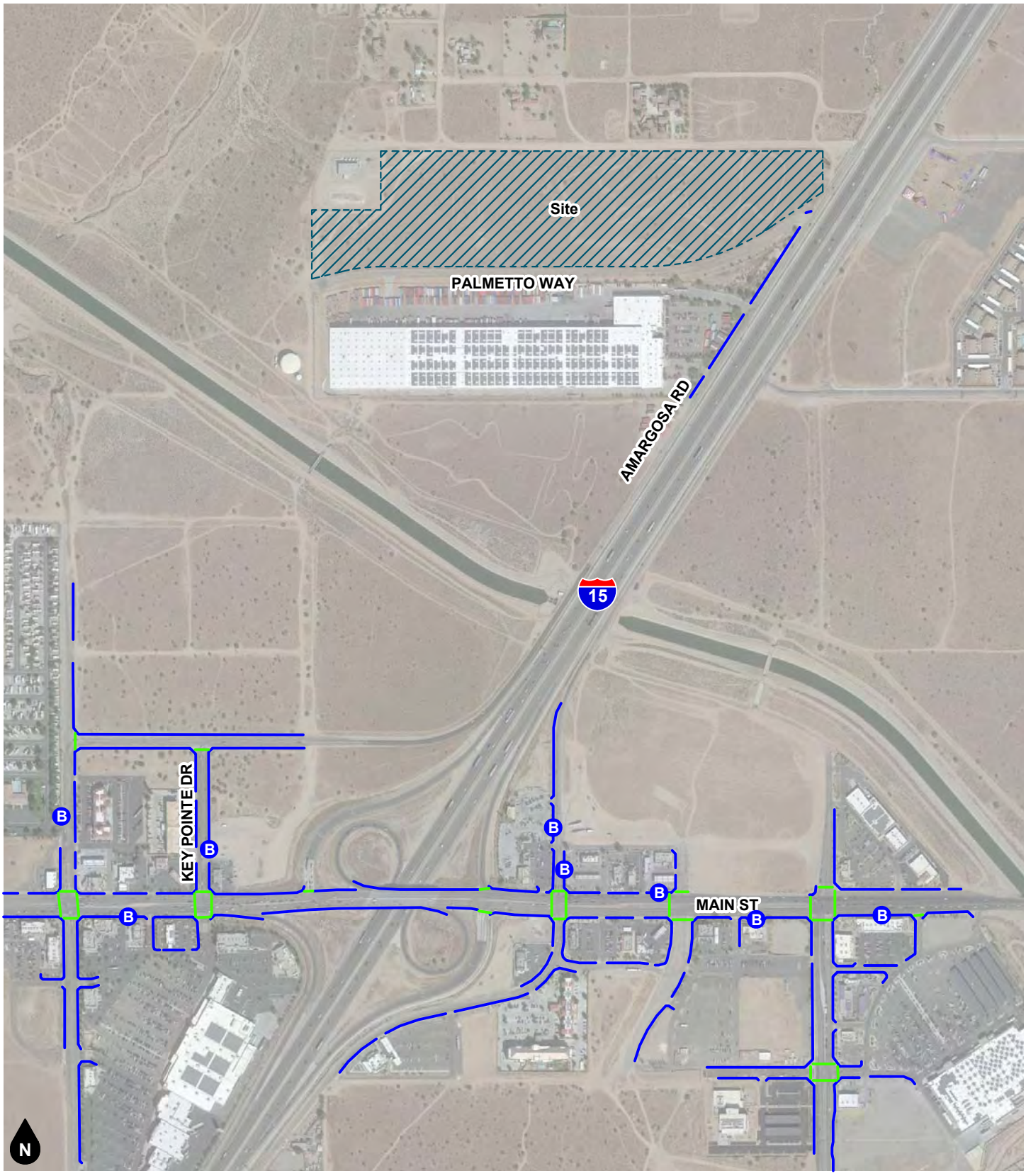


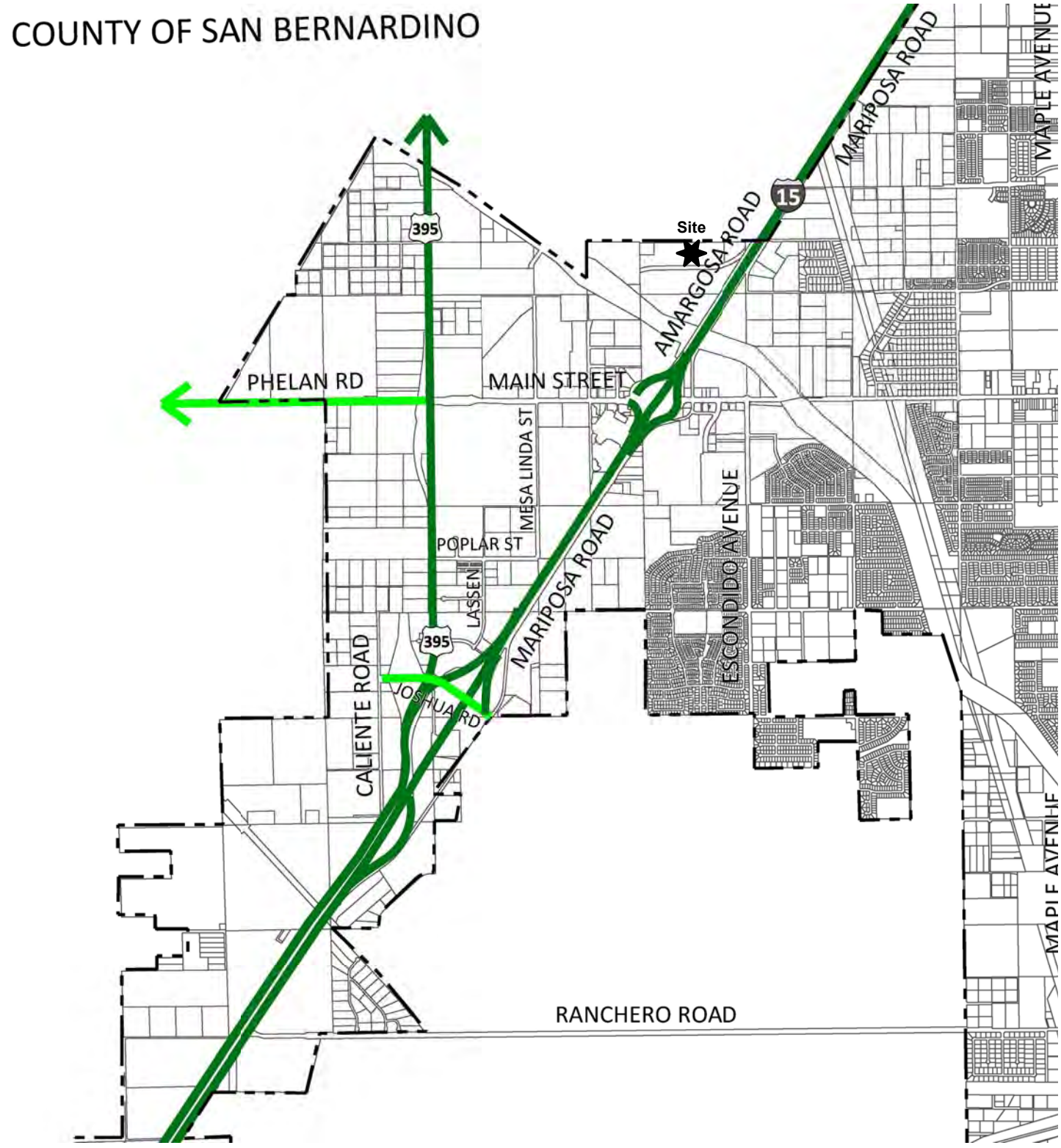
Figure 7
City of Hesperia General Plan Non-Motorized Transportation Plan Map

Source: City of Hesperia



Legend
- Sidewalk
- Cross Walk
- B Bus Stop

Figure 8
Existing Pedestrian Facilities



Source: City of Hesperia

Figure 9
City of Hesperia Truck Route Map

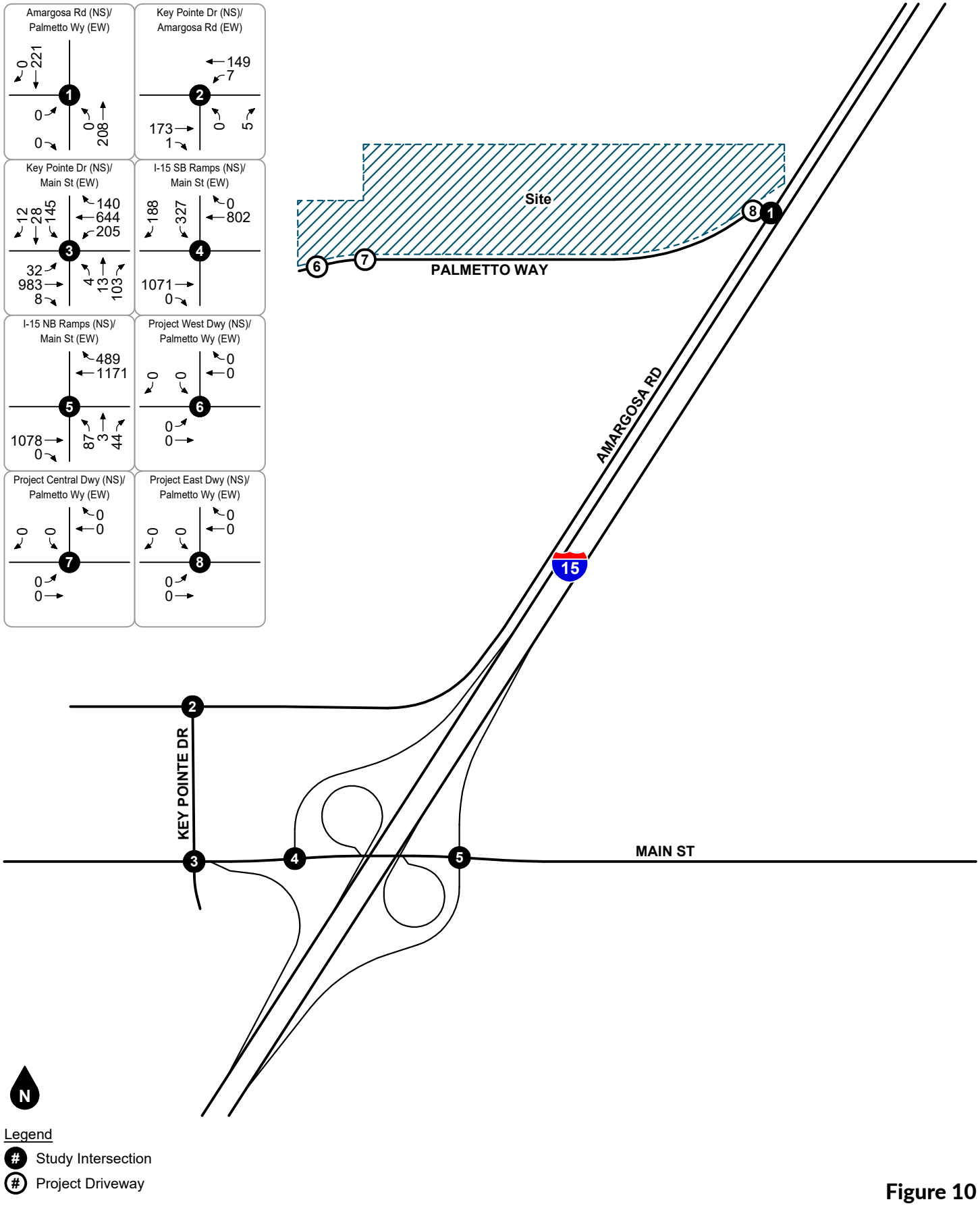


Figure 10
Existing AM Peak Hour Intersection Turning Movement Volumes

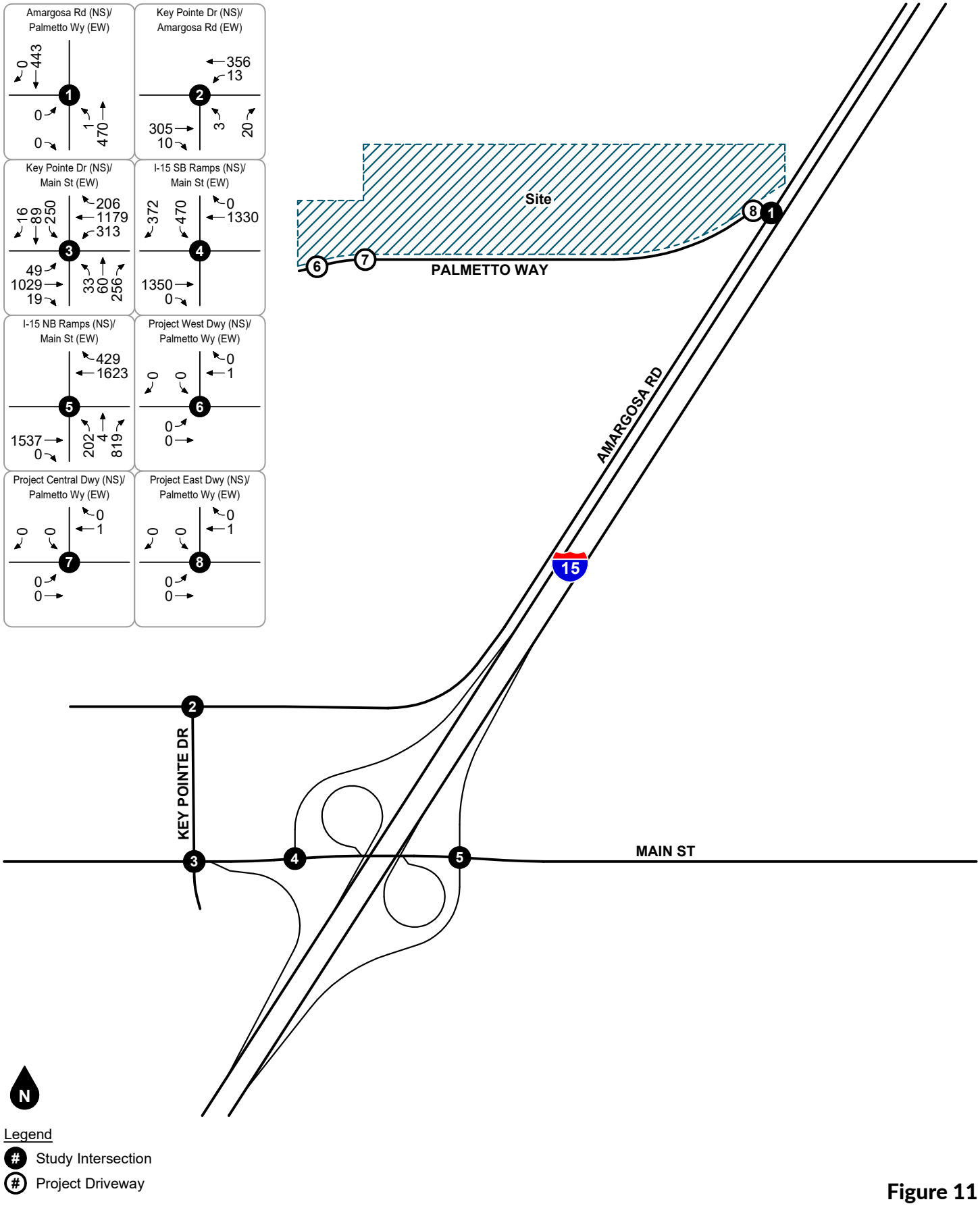


Figure 11
Existing PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated on figures contained in this section.

PROJECT TRIP GENERATION

shows the project trip generation based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Based on review of the ITE land use description, trip generation rates for ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) were determined to adequately represent the proposed use and were selected for calculation of the project trip generation forecast. The number of trips generated is determined by multiplying the trip generation rates and directional distributions by the land use quantity.

As shown in Table 2, the proposed project is forecast to generate 905 daily trips, including 74 trips during the AM peak hour and 77 trips during the PM peak hour.

Truck Trips

The project trip generation was also calculated in terms of Passenger Car Equivalent (PCE) trips. The percentage of truck trips was obtained from the ITE *Trip Generation Manual*. The truck mix by axle type was determined based on South Coast Air Quality Management District (SCAQMD) recommendations for high-cube warehousing facilities without cold-storage. Truck trips were converted to PCE trips based on the following factors: 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with four or more axles.

As also shown in Table 2, the proposed project is forecast to generate 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

Review of High-Cube Warehouse Rates

ITE provides the following land use description for Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort):

> *A high-cube warehouse (HCW) is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical HCW has a high level of on-site automation and logistics management. The automation and logistics enable highly-efficient processing of goods through the HCW. High-cube fulfillment center warehouses include warehouses characterized by a significant storage function and direct distribution of ecommerce product to end users. These facilities typically handle smaller packages and quantities than other types of HCWs and often contain multiple mezzanine levels.*

The ITE database further categorizes high-cube fulfillment center warehousing into sort or non-sort facilities. A sort facility is defined as a fulfillment center that ships out smaller items, requiring extensive manual sorting, whereas a non-sort facility ships out large box items that are processed primarily through automation. The trip generation rates for sorting facilities are substantially greater than rates for non-sort facilities; however, they are based on a limited sample size and may not necessarily represent typical operations. In addition, the limited data for sort facilities suggests a higher passenger car/light truck trip generation rate but lower heavy truck trip generation rate compared to non-sort facilities. Other types of high-cube warehouses include high-cube parcel hub and cold-storage warehouses, neither of which are currently contemplated uses for the proposed project.

Based on review of the available ITE data, ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) was determined to best represent a typical user for the type of building proposed, while still providing a more conservative daily trip estimate compared to a standard warehouse (ITE Land Use Code 150). To avoid grossly overestimating potential impacts and constructing unnecessary improvements, the project trip generation was calculated based on ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort). *Should a future potential tenant intend to occupy the building for use as a high-cube fulfillment center sorting facility, parcel hub, or cold-storage warehouse, preparation of a transportation demand management plan and/or further traffic analysis may be necessary to verify consistency with the trip estimates and findings of this study.*

Note that the proposed development will be limited to a non-sort warehouse fulfillment center. If a sorting facility is proposed, additional analysis will be required.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figure 12 to Figure 15 show the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns were developed using engineering judgment in consultation with City of Hesperia staff and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

Project AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 16 and Figure 17, respectively.

ALTERNATIVE LAND USE TRIP GENERATION

An alternative land use trip generation analysis has been conducted to determine the difference in trips generated between the proposed project as a High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) land use versus the project site at the same square footage as a Shopping Center land use.

Table 3 shows the alternative land use (commercial retail) trip generation based on regression equations from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 820 (Shopping Center (>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use.

It should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 3 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative land use trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021) since Amargosa Road adjacent to the project site is a low volume roadway and pass-by trips would be minimal.

As shown in Table 3, the alternative land use is forecast to generate a total of approximately 18,915 daily trips, including 429 trips during the AM peak hour and 1,798 trips during the PM peak hour without a pass-by trips reduction.

TRIP GENERATION COMPARISON

Table 4 shows the difference in project trip generation between the proposed project and the alternative land use. The purpose of this analysis is to highlight the substantial decrease in trips generated between the proposed industrial land use in comparison to an equivalent size commercial retail development that could be permitted in accordance with the current land use designation.

As shown in Table 4, the proposed project is forecast to generate approximately 17,832 fewer daily trips compared to a shopping center land use of equivalent size, including 339 fewer trips during the AM peak hour and 1,717 fewer trips during the PM peak hour. Appendix D includes the *Amargosa and Palmeto High-Cube Warehouse Trip Generation Comparison Analysis* (Ganddini Group, Inc., November 28,2022) which is a supplemental analysis that goes into greater detail regarding differences in turning movements at the study area intersections.

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.714 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 3
Alternative Land Use Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Units[2]	% In	% Out	Equation	% In	% Out	Equation	Daily Equation
Shopping Center (>150k)	ITE 820	TSF	62%	38%	T=0.59(X) + 133.55	48%	52%	LN(T) = 0.72Ln(X) + 3.02	T = 26.11(X) + 5863.73

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units[3]	In	Out	Total	In	Out	Total	Daily
Shopping Center (>150k)	499.850	TSF	266	163	429	863	935	1,798	18,915

Notes:
(1) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.

(2) TSF = Thousand Square Feet

Table 4
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	Daily
Project[1]	65	25	90	32	49	81	1,083
Alternative Land Use[2]	266	163	429	863	935	1,798	18,915
Difference	**-201**	**-138**	**-339**	**-831**	**-886**	**-1,717**	**-17,832**
	-76%	**-85%**	**-79%**	**-96%**	**-95%**	**-95%**	**-94%**

Notes:
(1) See Table 2.
(2) See Table 3.

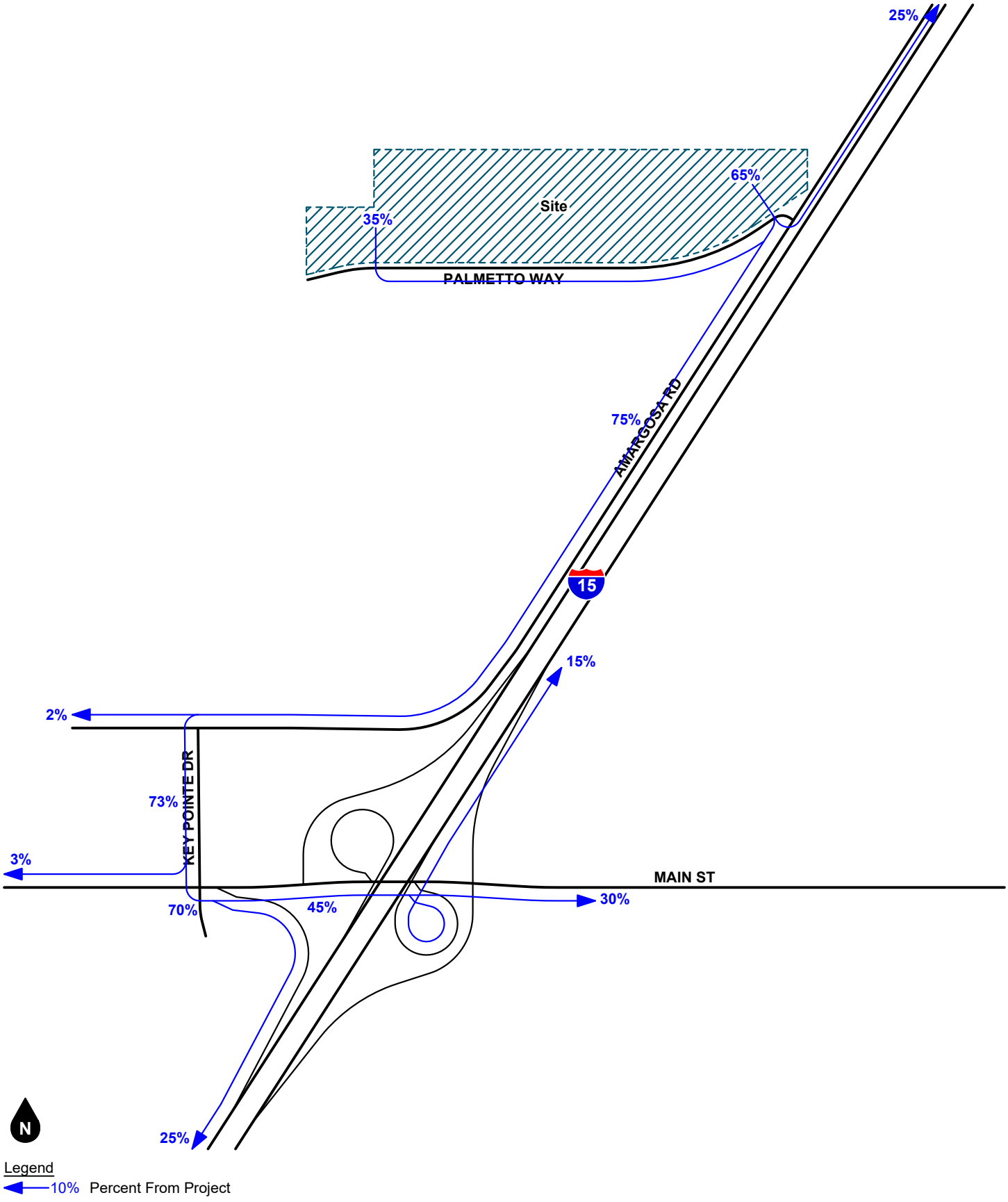


Figure 12
Project Outbound Trip Distribution - Cars

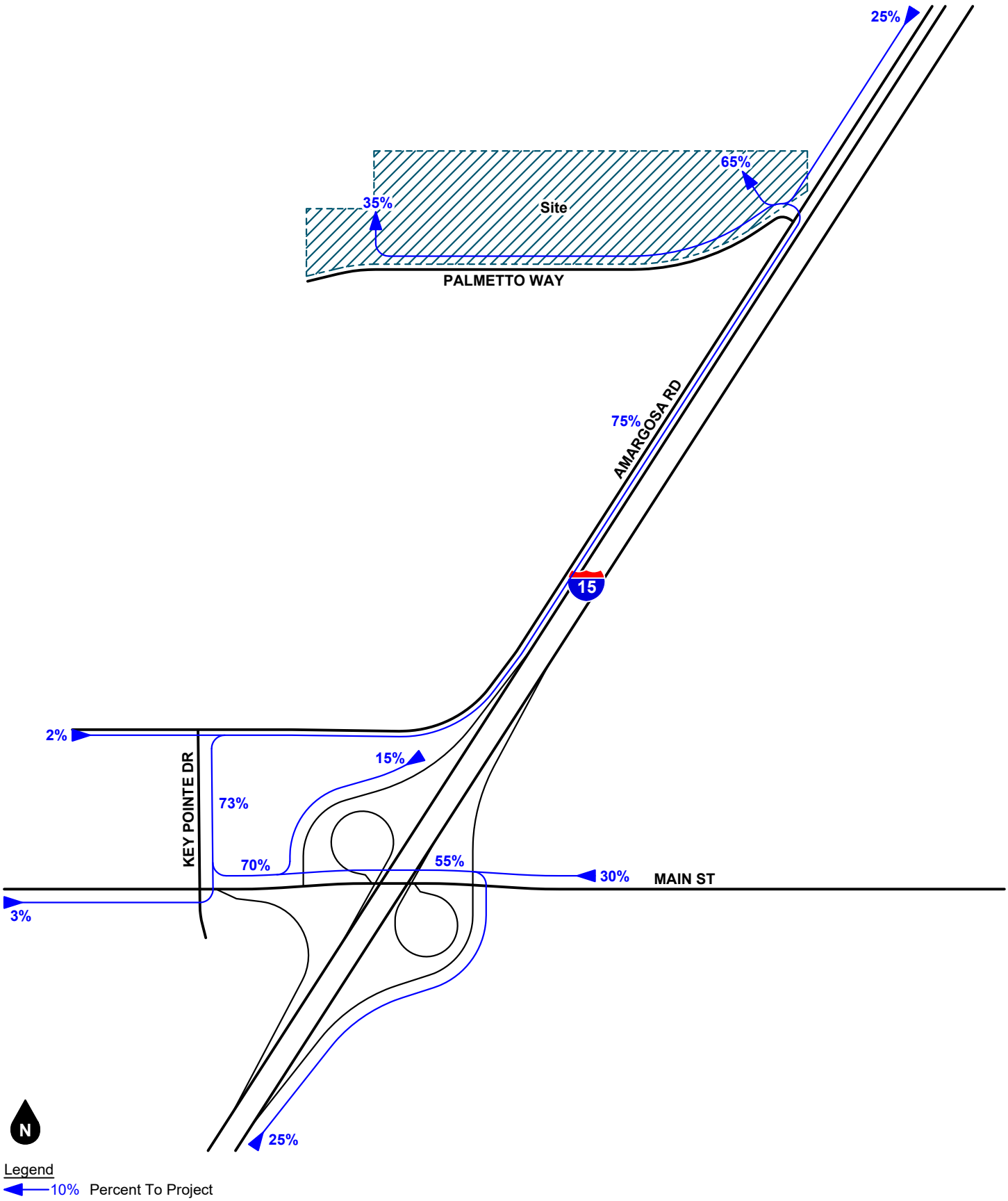


Figure 13
Project Inbound Trip Distribution - Cars

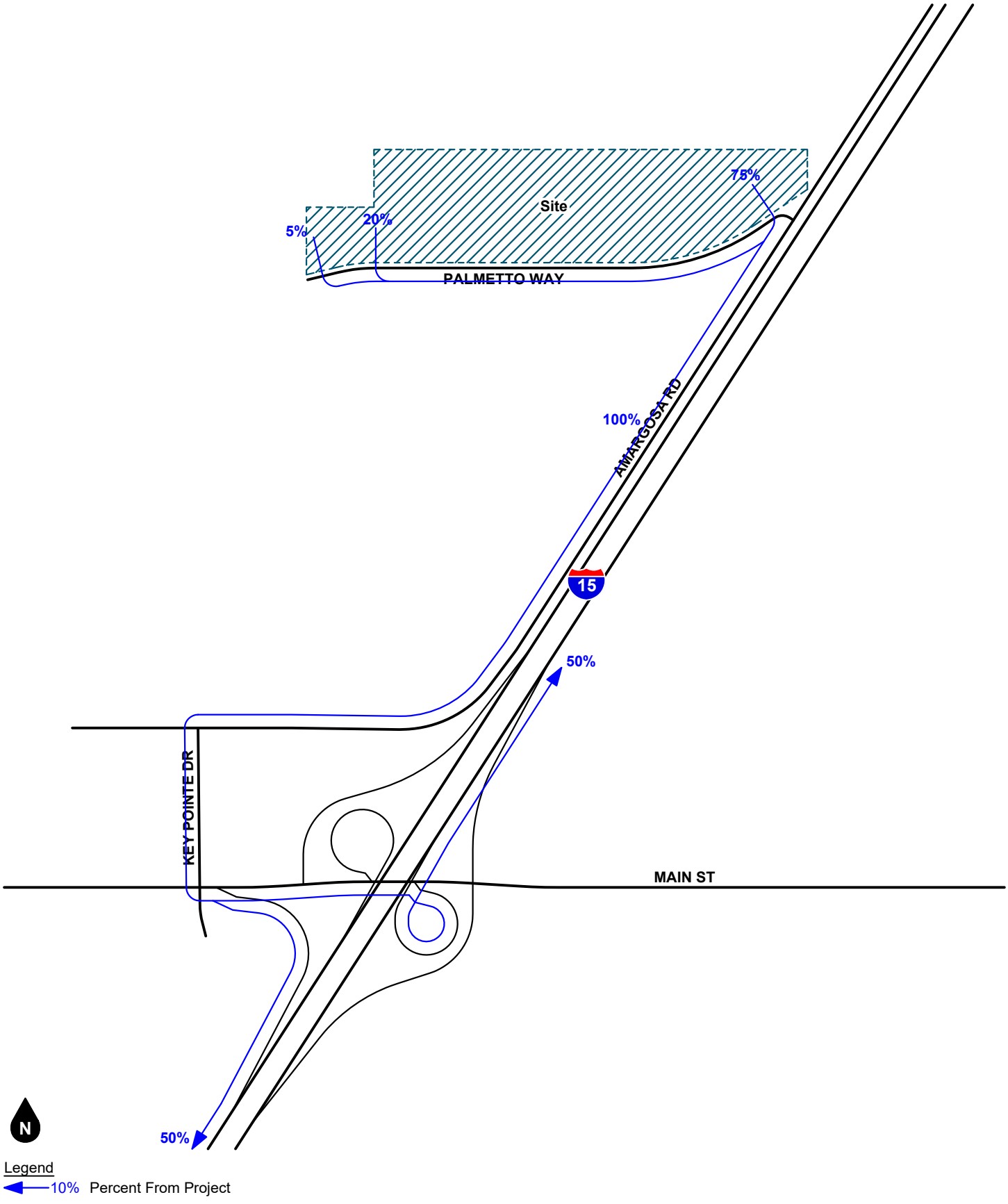


Figure 14
Project Outbound Trip Distribution - Trucks

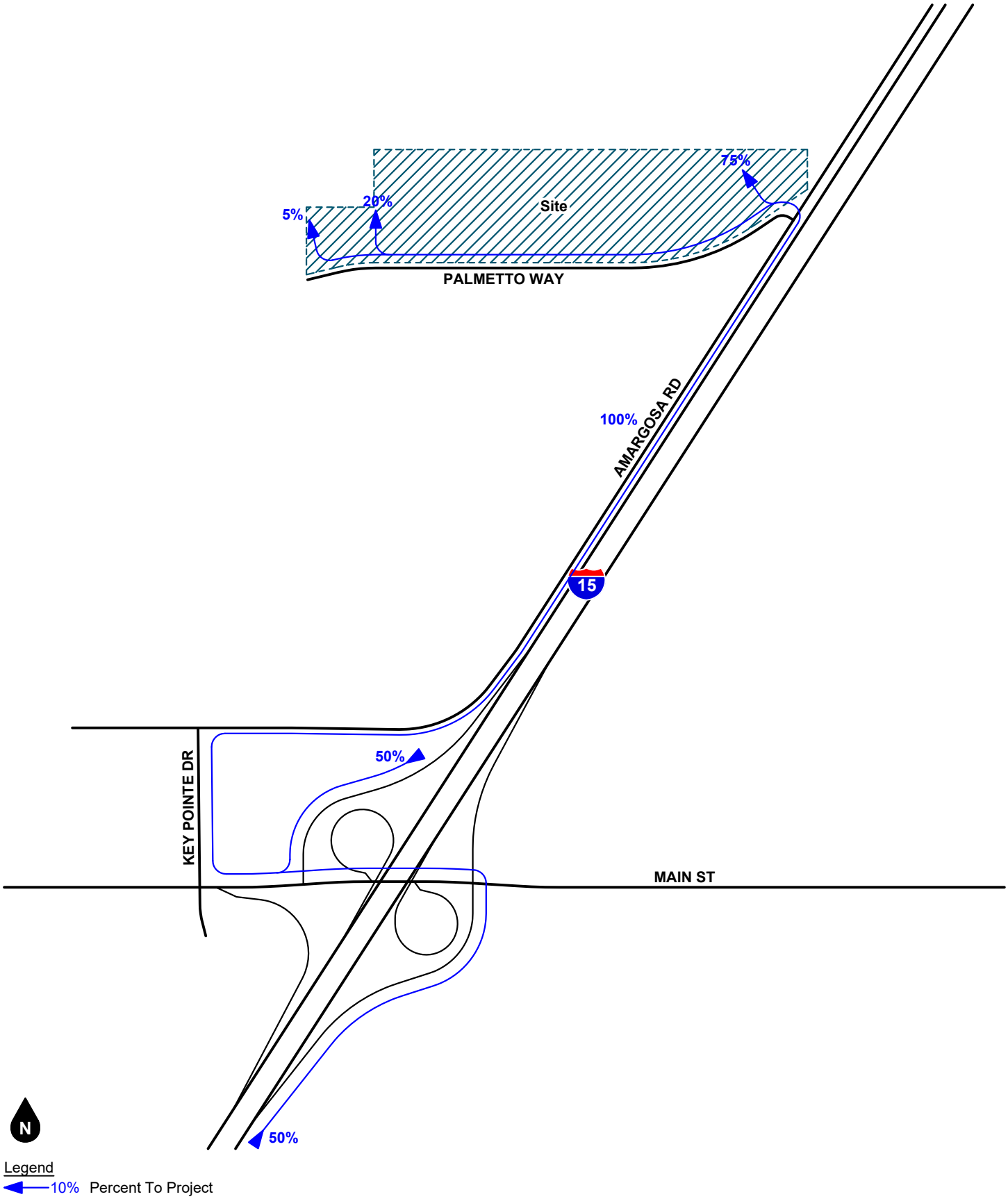


Figure 15
Project Inbound Trip Distribution - Trucks

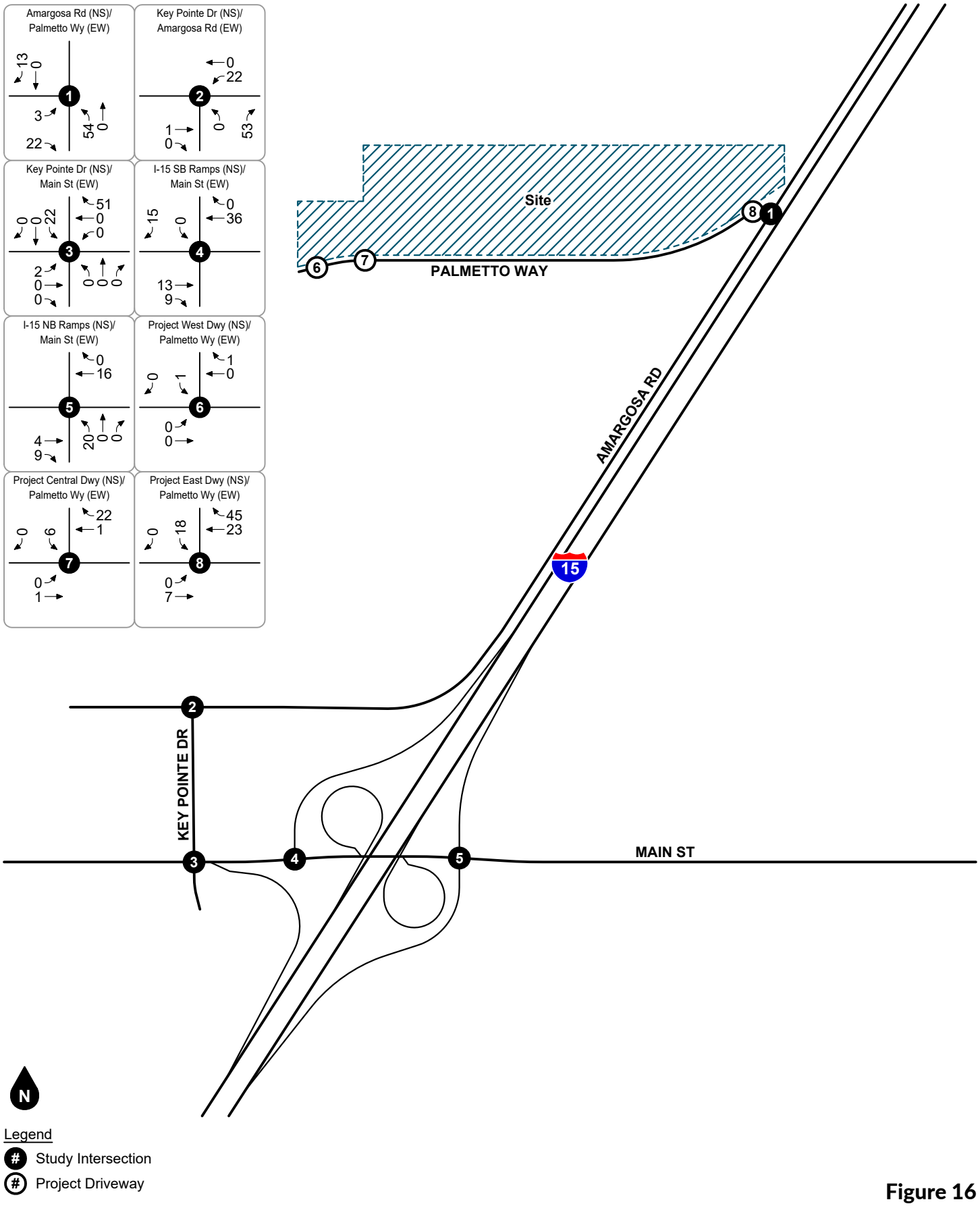


Figure 16
Project AM Peak Hour Intersection Turning Movement Volumes

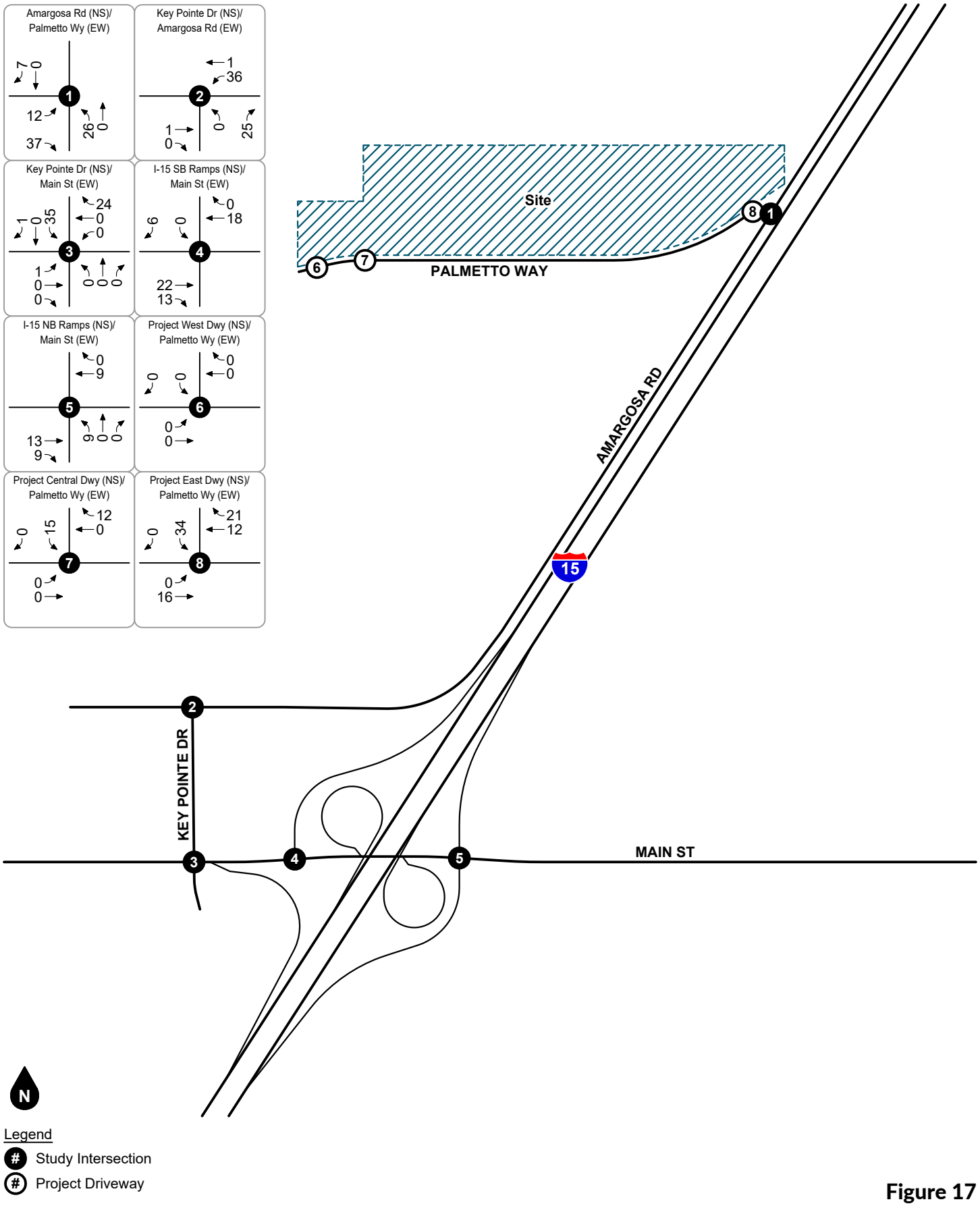


Figure 17
Project PM Peak Hour Intersection Turning Movement Volumes

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

CUMULATIVE TRIPS

Ambient Growth Rate

To account for ambient growth on roadways, existing 2022 volumes were increased by a growth rate of two percent (2%) per year over five years for Opening Year (2027) conditions; this equates to a total growth factor of approximately 1.104. The ambient growth rate was conservatively applied to all movements at the study intersections.

Other Development

To account for trips generated by future development, trips generated by pending or approved other development projects were added to the study area. Table 5 shows the other development project list for projects anticipated to contribute appreciable trips to the study area intersections and Figure 18 shows the other development location map.

Figure 19 and Figure 20 show the forecast AM and PM peak hour intersection turning movement volumes for trips generated by other developments.

GENERAL PLAN BUILDOUT (2040) PROJECTIONS

General Plan Buildout (2040) forecasts have been determined using a growth increment approach with the San Bernardino Transportation Analysis Model (SBTAM) Year 2016 and Year 2040 travel demand model plots. This difference defines the incremental growth in forecast volumes over the 24-year period between 2016 and 2040. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between the current year traffic counts (2022) and year 2040. For this purpose, linear growth between the Year 2016 base condition and the forecast Year 2040 condition was assumed. Since the increment between the current year and Year 2040 is 18 years of the 24-year time frame, a factor of 0.75 (i.e., 18/24) was used.

To derive AM and PM peak hour intersection turning movement volumes, the roadway link growth forecasts were further refined using a spreadsheet program developed by the Federal Highway Administration and consistent with forecasting procedures outlined in the National Cooperative Highway Research Program Report 255. The spreadsheet program uses a linear programming algorithm to calculate future turning movements based on the relationship of existing intersection turning movements and forecast model growth. The forecast turning movements developed by the spreadsheet program were reviewed for reasonableness and adjusted as necessary to ensure no less than 10 percent traffic growth. The end results of the post-processing procedures are future traffic volumes suitable for analysis. Travel demand model plots are provided in Appendix F and post-processing worksheets are provided in Appendix G.

ANALYSIS SCENARIO VOLUME FORECASTS

Opening Year (2027) Without Project

To develop Opening Year (2027) Without Project volume forecasts, existing volumes were combined with ambient growth and trips generated by other developments. Opening Year (2027) Without Project AM and PM peak hour intersection turning movement volumes are shown Figure 21 and Figure 22.

Opening Year (2027) With Project

Opening Year (2027) With Project volume forecasts were developed by adding project generated trips to the Opening Year (2027) Without Project forecast. Opening Year (2027) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 23 and Figure 24.

General Plan Buildout (2040) Without Project

General Plan Buildout (2040) Without Project volume forecasts were developed based on the SBTAM travel demand model and post-processing procedures as described above. General Plan Buildout (2040) Without Project AM and PM peak hour intersection turning movement volumes are shown on Figure 25 and Figure 26.

General Plan Buildout (2040) With Project

General Plan Buildout (2040) With Project volumes were developed by adding project generated trips to the General Plan Buildout (2040) Without Project forecast volumes. General Plan Buildout (2040) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 27 and Figure 28.

Table 3 (1 of 2)
Other Development Trip Generation

Project Name	Land Use	Quantity	Trips Generated[2]						
			AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	Daily
CUP23-00008	Fulfillment Center Warehouse	469.979 TSF							
	- Passenger Cars		49	12	61	28	43	71	743
	- Trucks (in PCE)		13	13	26	3	3	6	277
	Subtotal		62	25	87	31	46	77	1,020
Kiss Logistics Center	Fulfillment Center Warehouse	655.468 TSF							
(CUP22-00017)	- Passenger Cars		69	16	85	39	60	99	1,036
	- Trucks (in PCE)		16	16	32	10	10	20	382
	Subtotal		85	32	117	49	70	119	1,418
Hesperia Commerce Center II	Fulfillment Center Warehouse	3,901.194 TSF							
(includes CUPR24-0001)	- Passenger Cars		410	98	508	230	359	589	6,164
	- Trucks (in PCE)		97	97	194	50	50	100	2,282
	Subtotal		507	195	702	280	409	689	8,446
CUP23-00005/Phelan 20	Fulfillment Center Warehouse	419.700 TSF							
	- Passenger Cars		44	10	54	25	39	64	663
	- Trucks (in PCE)		13	13	26	3	3	6	244
	Subtotal		57	23	80	28	42	70	907
Pixior	Fulfillment Center Warehouse	440.000 TSF							
(CUPR25-00001)	- Passenger Cars		46	11	57	26	40	66	695
	- Trucks (in PCE)		13	13	26	3	3	6	257
	Subtotal		59	24	83	29	43	72	952
CUP24-00005	Commercial Retail	167.664 TSF	87	54	141	273	297	570	6,205
Newcastle	Fulfillment Center Warehouse	400.000 TSF							
(CUP22-00004)	- Passenger Cars		42	10	52	24	37	61	632
	- Trucks (in PCE)		10	10	20	3	3	6	235
	Subtotal		52	20	72	27	40	67	867
Poplar 18 Industrial Park	Fulfillment Center Warehouse	414.700 TSF							
(CUP21-00010)	- Passenger Cars		44	10	54	24	38	62	655
	- Trucks (in PCE)		10	10	20	3	3	6	244
	Subtotal		54	20	74	27	41	68	899
I-15 Industrial Park Project	Fulfillment Center Warehouse	1,850.000 TSF							
(CUP21-00004)	- Passenger Cars		194	46	240	109	170	279	2,923
	- Trucks (in PCE)		47	47	94	25	25	50	1,081
	Subtotal		241	93	334	134	195	329	4,004
Industrial Center	Warehouse	74.924 TSF							
(CUP22-00016/CUP24-0003)	- Passenger Cars		9	3	12	3	8	11	83
	- Trucks (in PCE)		3	0	3	3	3	6	113
	Subtotal		12	3	15	6	11	17	196

Table 3 (2 of 2)
Other Development Trip Generation

Project Name	Land Use	Quantity	Trips Generated[2]						
			AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	Daily
SPR22-00017	Fulfillment Center Warehouse	142.634 TSF							
	- Passenger Cars		15	4	19	8	13	21	225
	- Trucks (in PCE)		3	3	6	0	0	0	85
	Subtotal		18	7	25	8	13	21	310
SPR24-00006	Fulfillment Center Warehouse	91.569 TSF							
	- Passenger Cars		10	2	12	5	8	13	145
	- Trucks (in PCE)		3	3	6	0	0	0	52
	Subtotal		13	5	18	5	8	13	197
Dara Industrial Project	Fulfillment Center Warehouse	750.000 TSF							
(CUP22-00003)	- Passenger Cars		79	19	98	44	69	113	1,185
	- Trucks (in PCE)		22	22	44	10	10	20	440
	Subtotal		101	41	142	54	79	133	1,625
CUP23-00007	Truck Parking	83 SP	7	1	8	1	6	7	59
SPR23-00024	Fulfillment Center Warehouse	150.000 TSF							
	- Passenger Cars		16	4	20	9	14	23	237
	- Trucks (in PCE)		3	3	6	0	0	0	89
	Subtotal		19	7	26	9	14	23	326
Hesperia Commerce Center	Fulfillment Center Warehouse	3,500.000 TSF							
(SPR23-00024)	- Passenger Cars		368	88	456	207	322	529	5,530
	- Trucks (in PCE)		88	88	176	47	47	94	2,048
	Subtotal		456	176	632	254	369	623	7,578
Total			1,830	726	2,556	1,215	1,683	2,898	35,009

Notes:
(1) TSF = Thousand Square Feet; SU = Storage Units

(2) Based on trip generation rates from:
ITE = Institute of Transportation Engineers Trip Generation Manual (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.
PCE = Passenger Car Equivalent

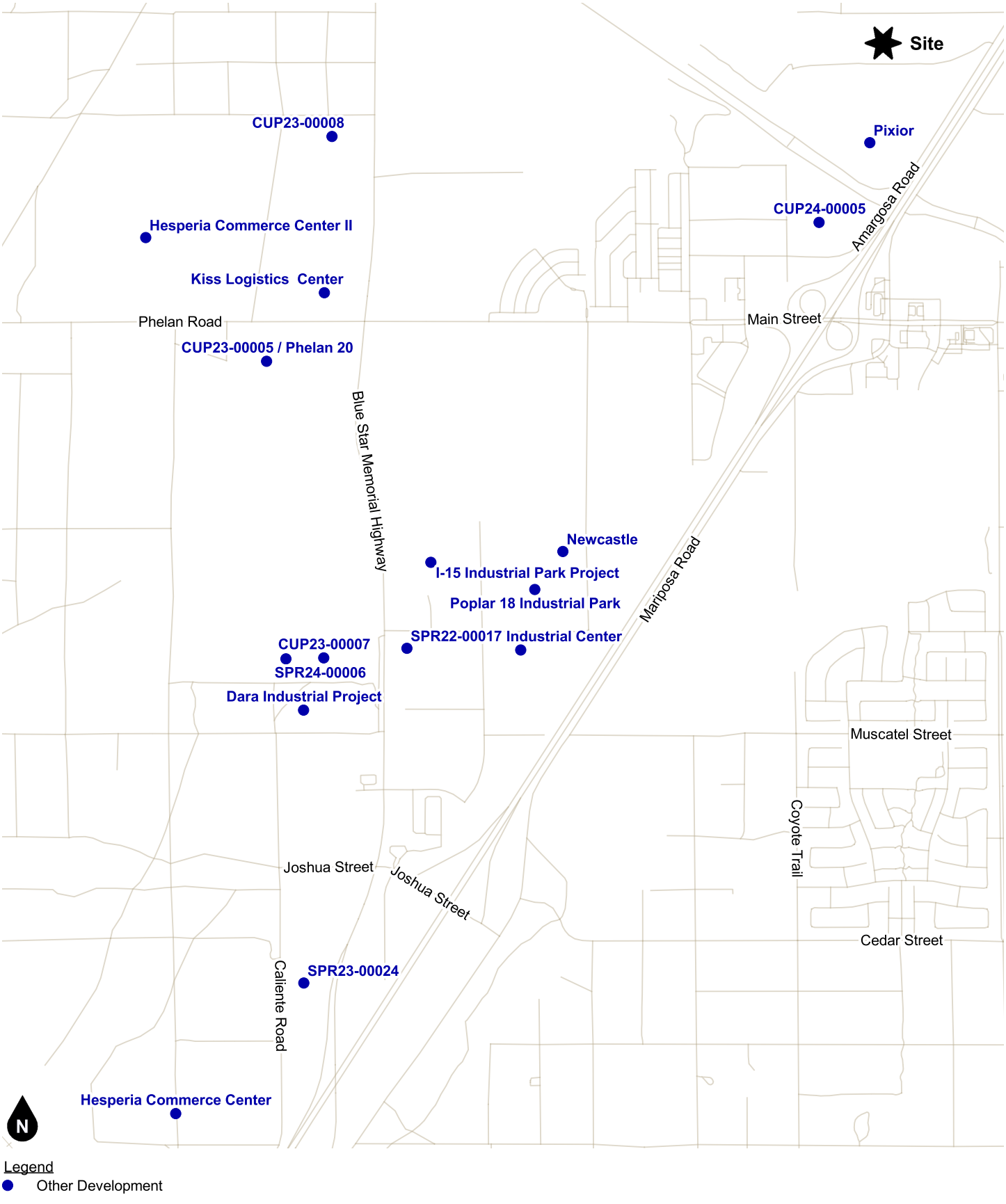


Figure 18
Other Development Location Map

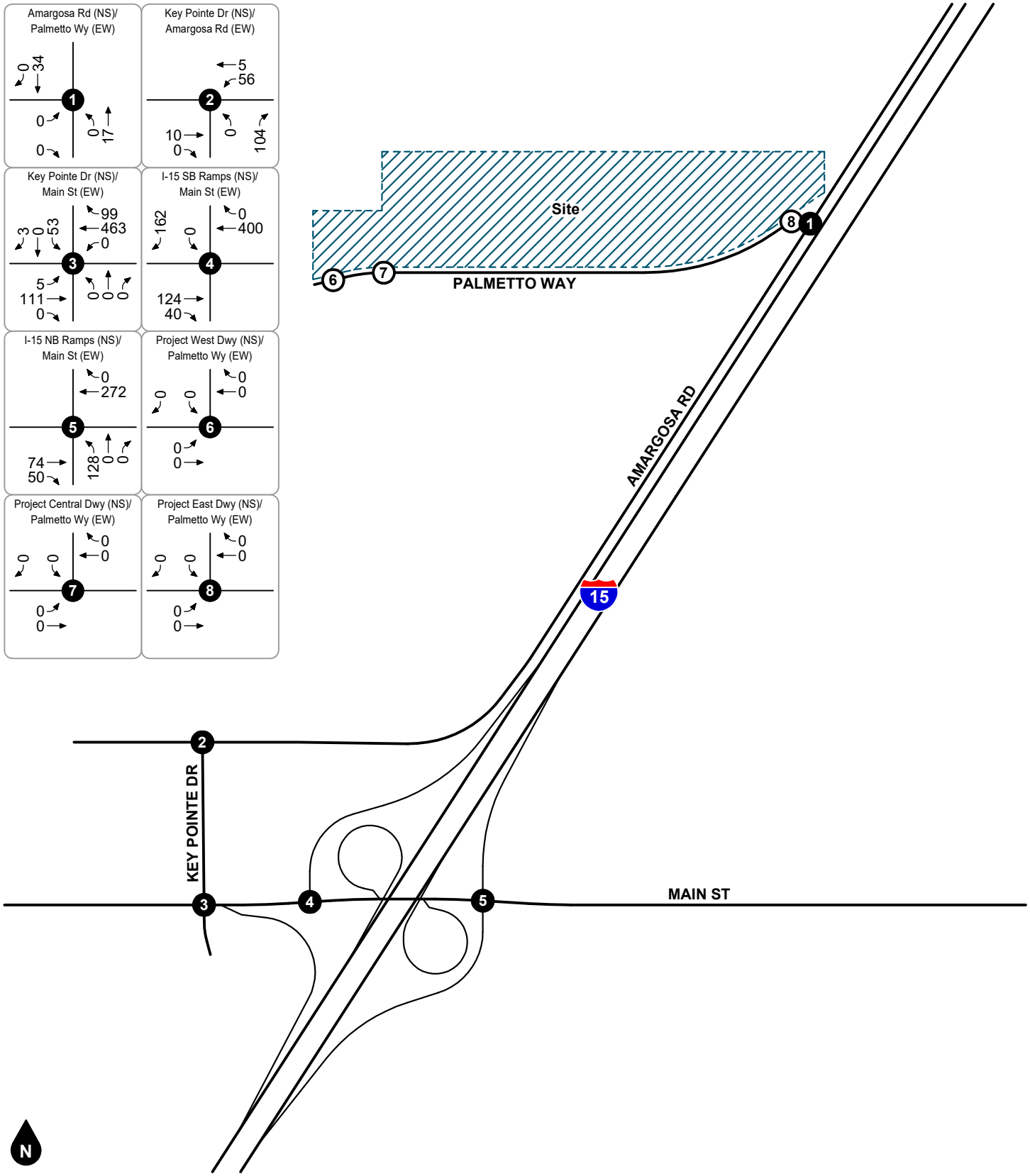


Figure 19
Other Development
AM Peak Hour Intersection Turning Movement Volumes

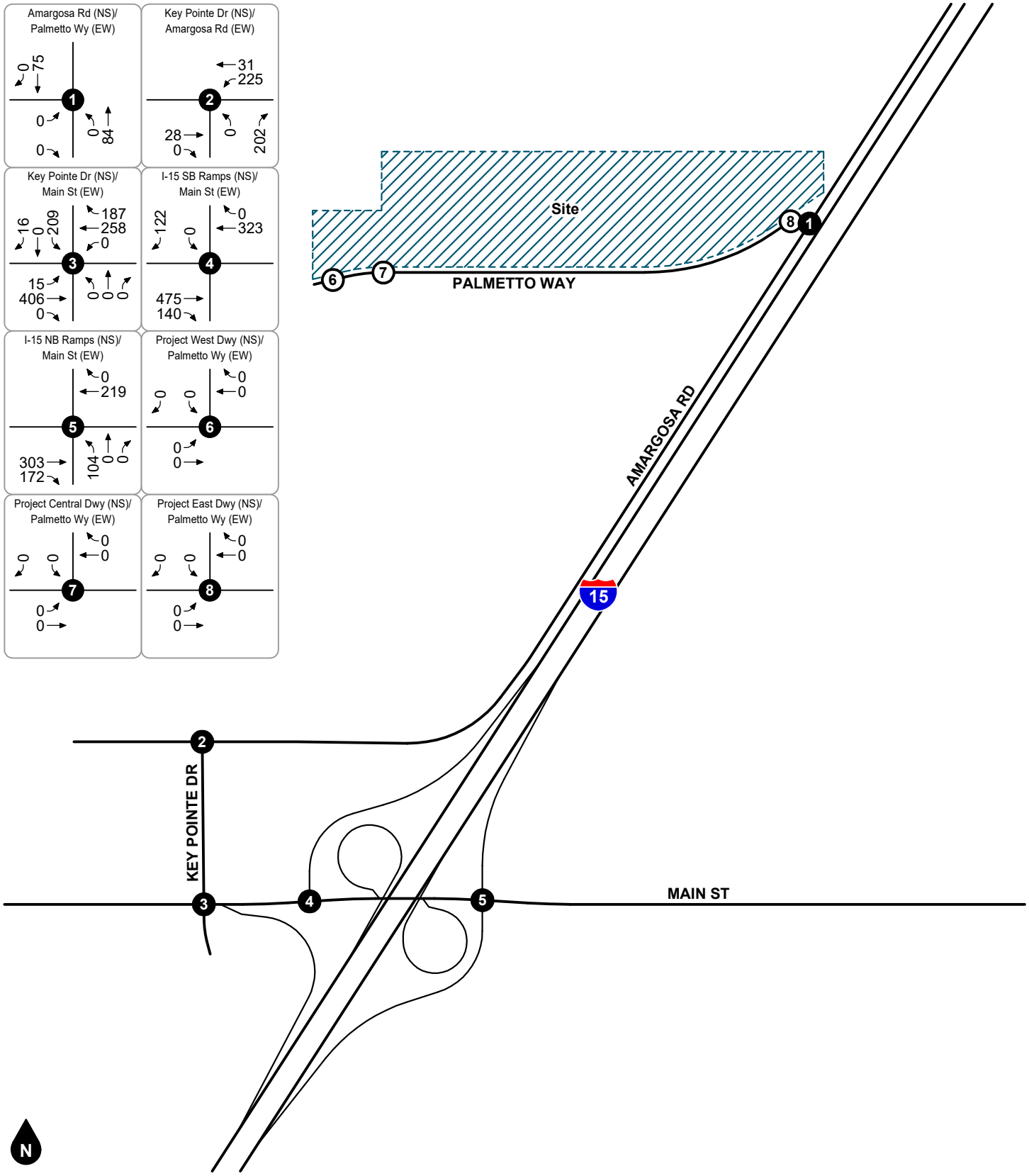


Figure 20
Other Development
PM Peak Hour Intersection Turning Movement Volumes

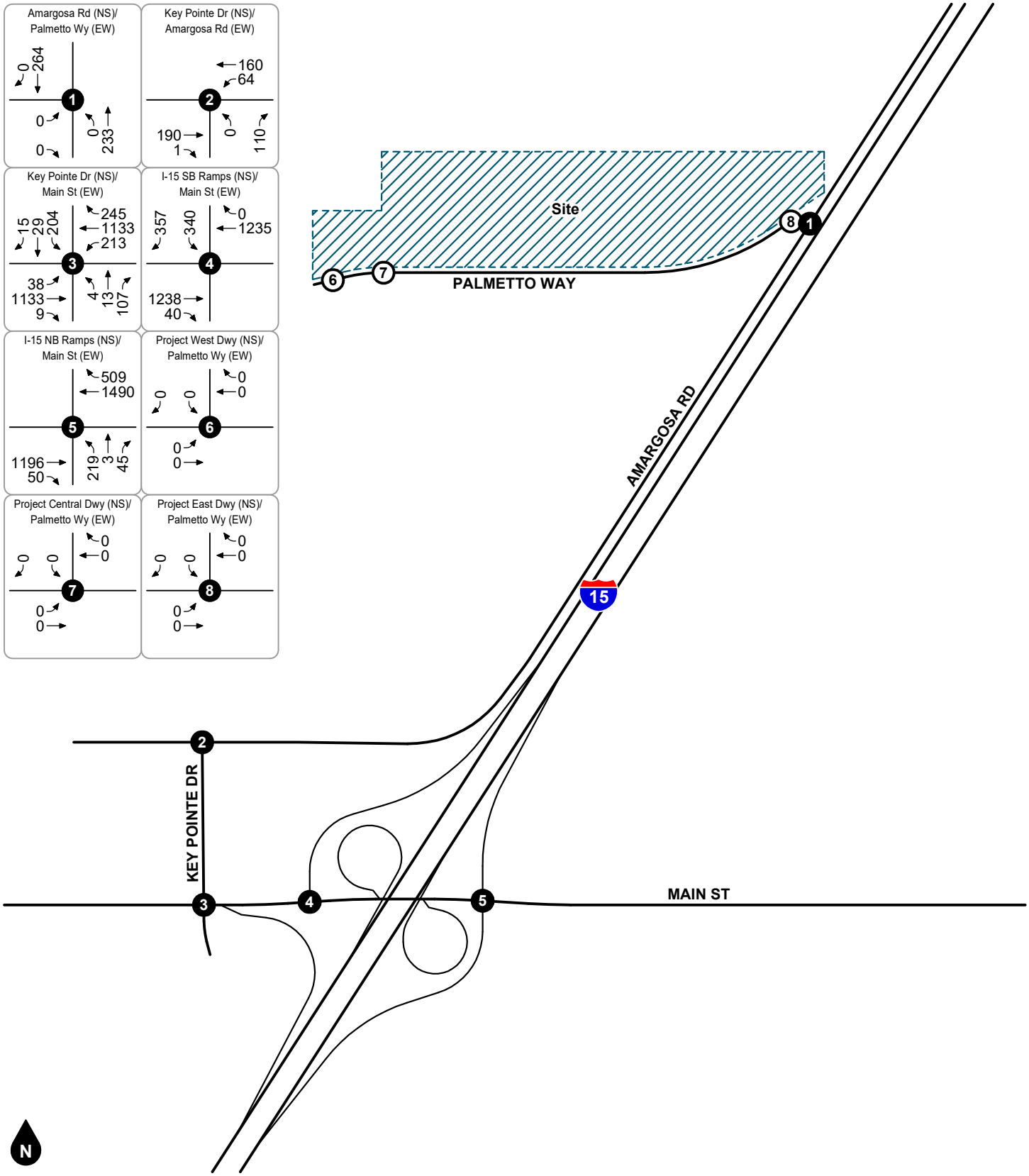


Figure 21
Opening Year (2027) Without Project
AM Peak Hour Intersection Turning Movement Volumes

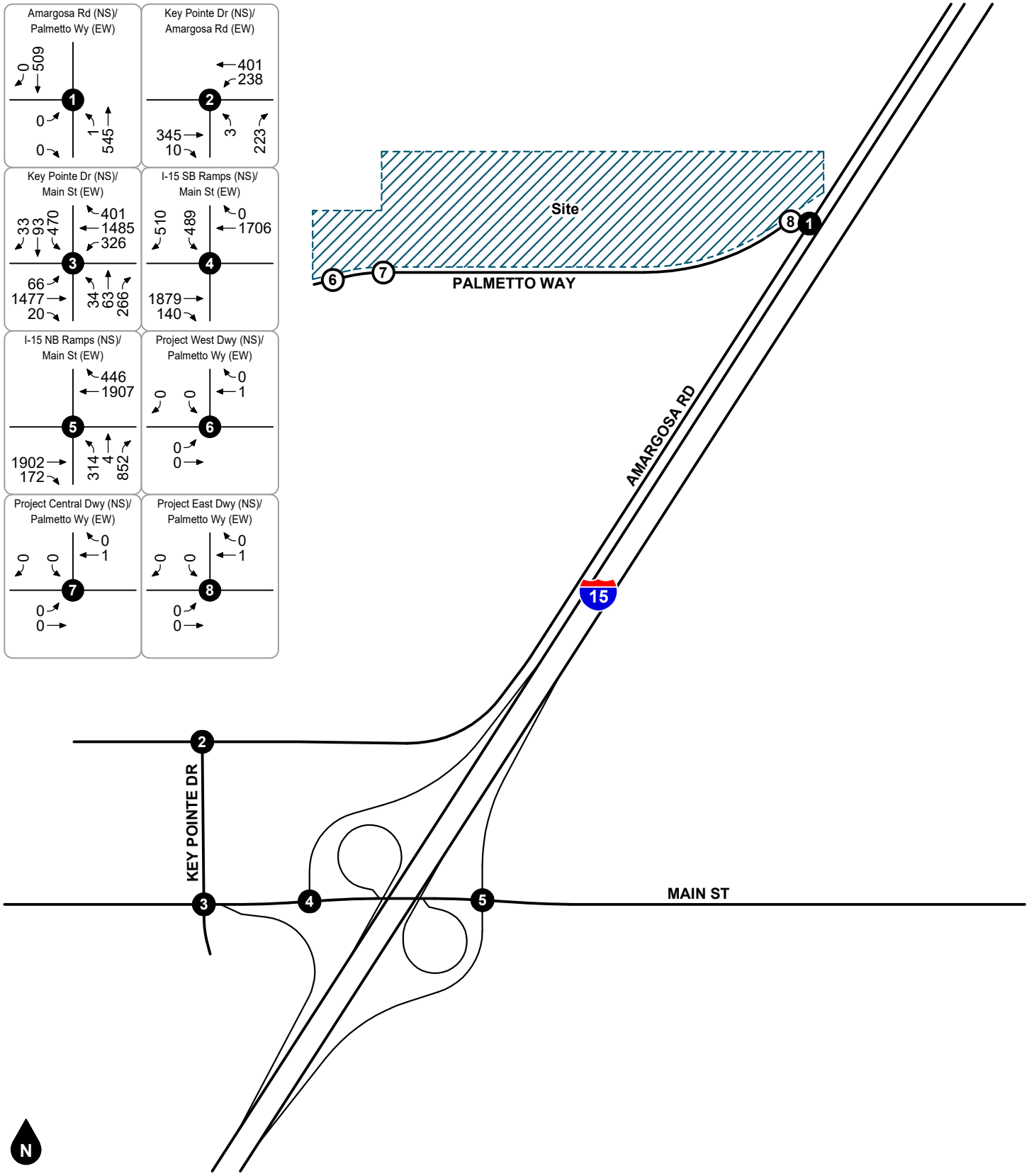
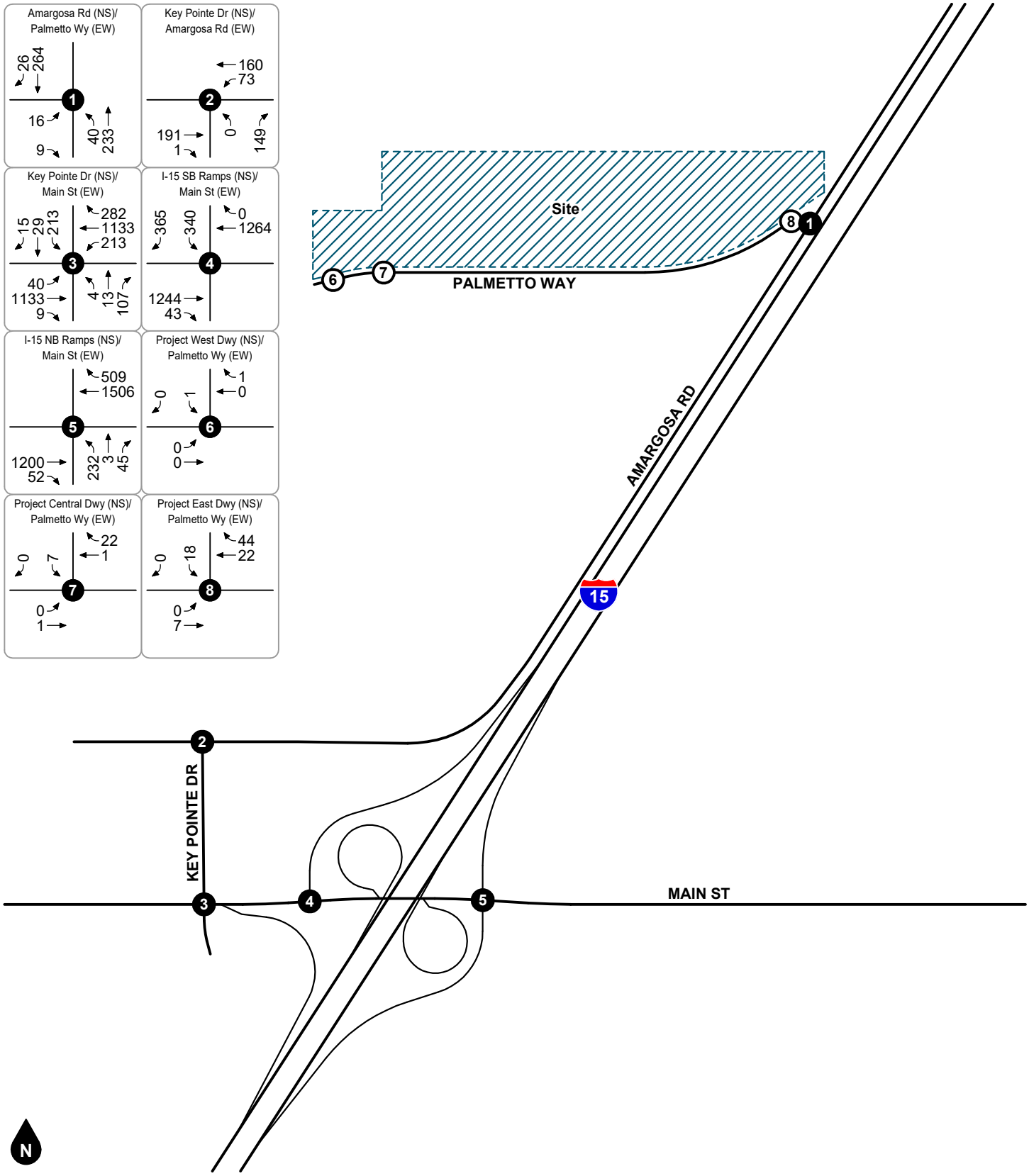


Figure 22
Opening Year (2027) Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

(#) Project Driveway

Figure 23
Opening Year (2027) With Project
AM Peak Hour Intersection Turning Movement Volumes

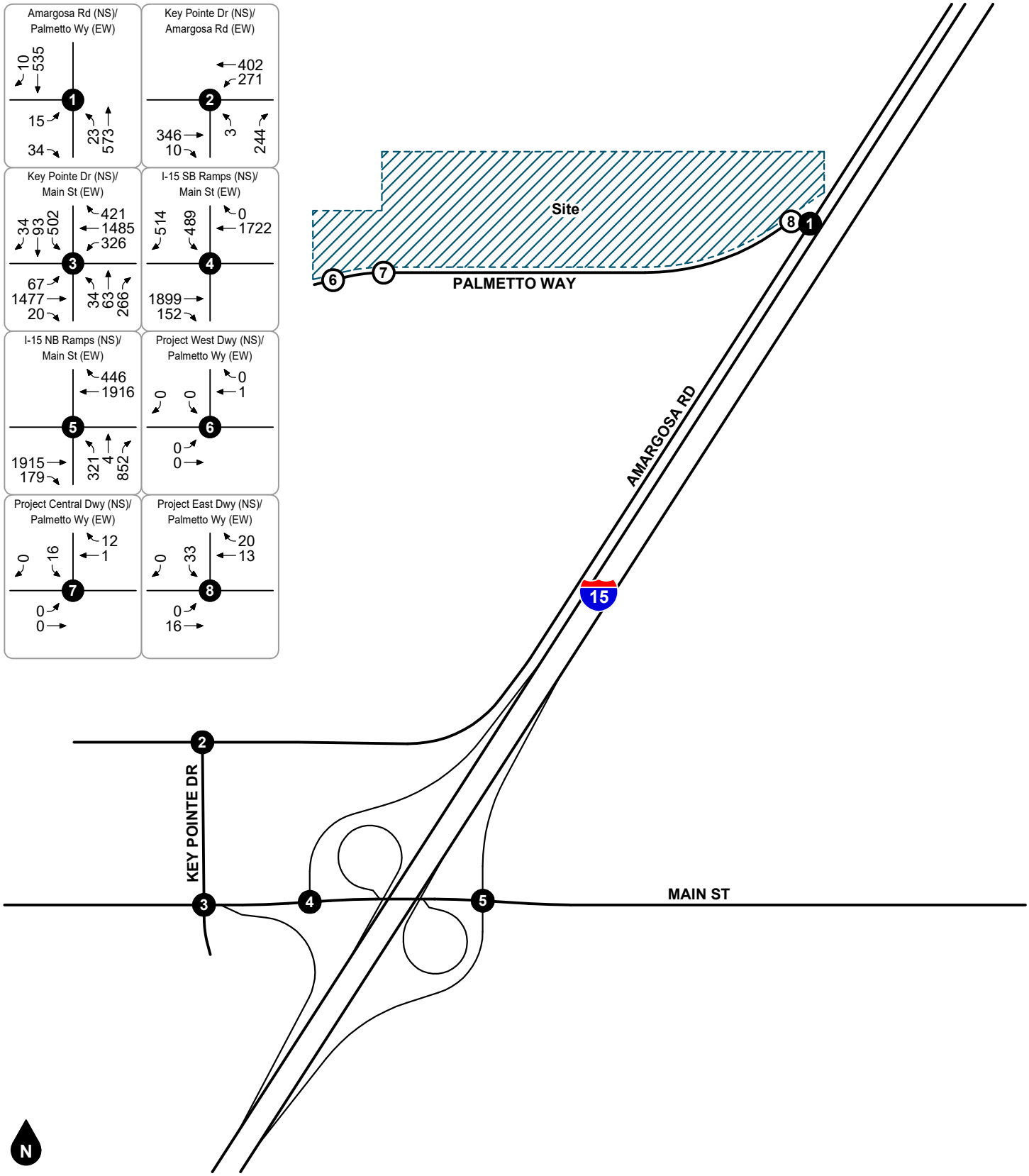
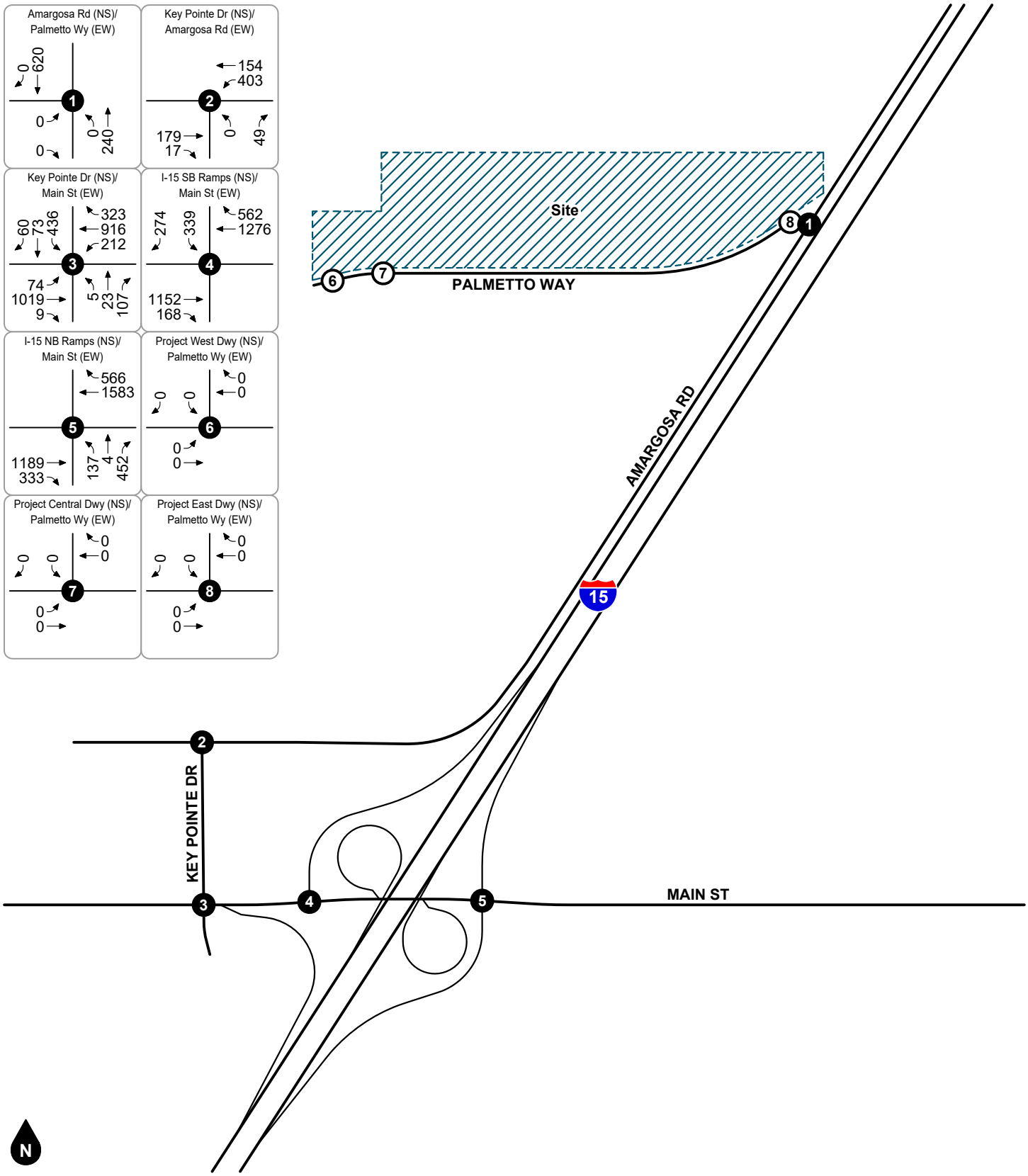


Figure 24
Opening Year (2027) With Project
PM Peak Hour Intersection Turning Movement Volumes

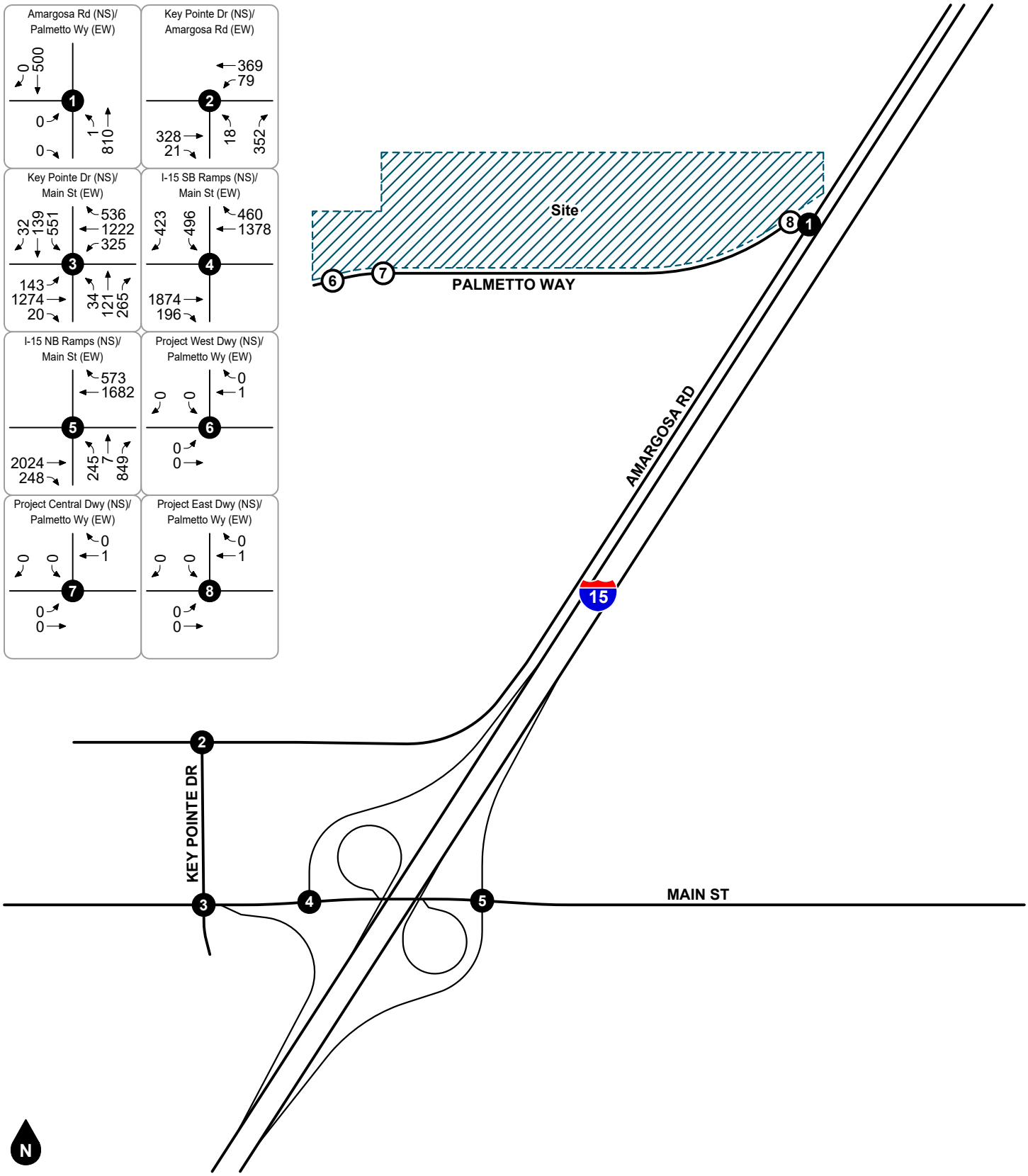


Legend

(#) Study Intersection

(#) Project Driveway

Figure 25
General Plan Buildout (2040) Without Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

(#) Project Driveway

Figure 26
General Plan Buildout (2040) Without Project
PM Peak Hour Intersection Turning Movement Volumes

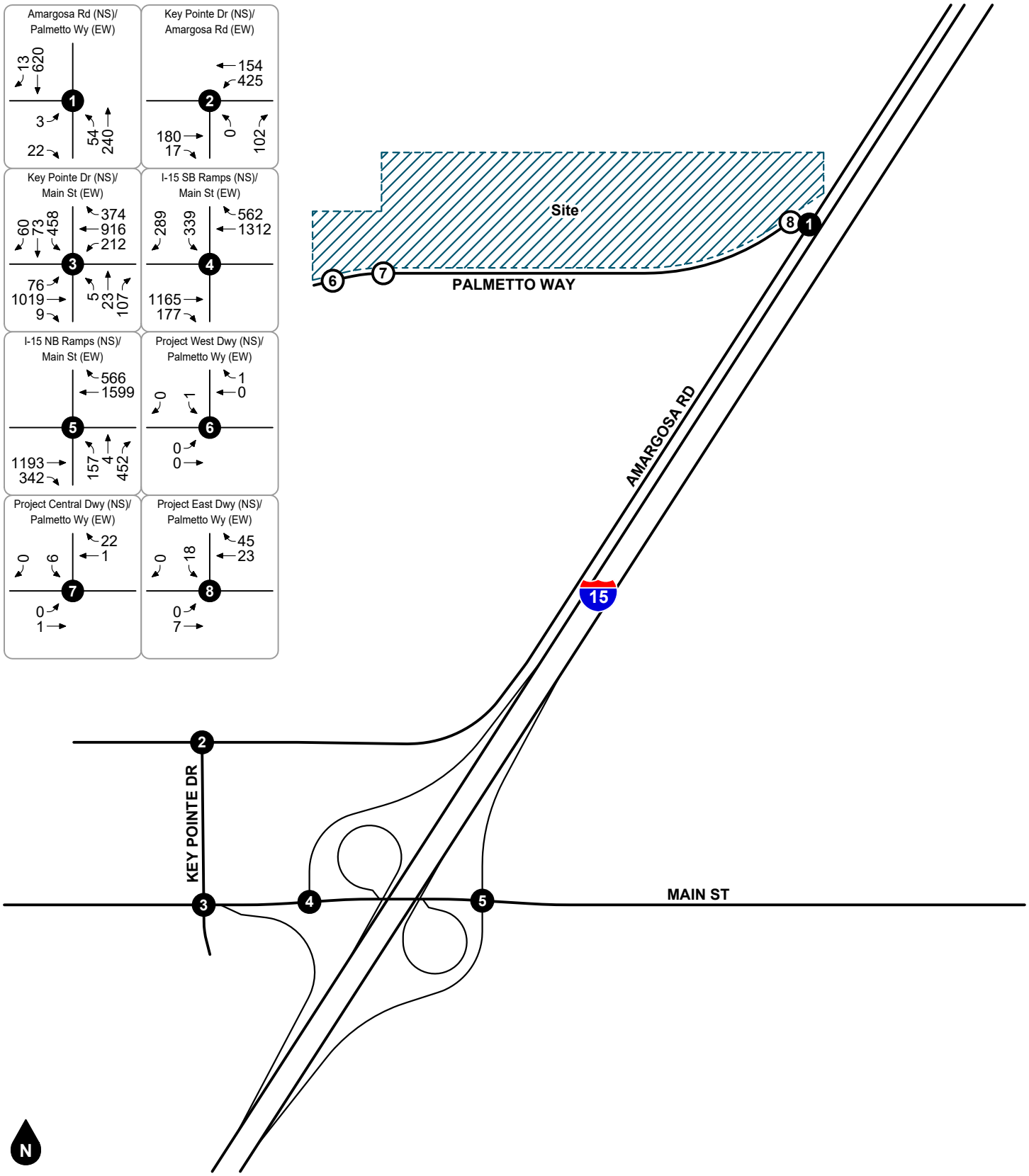
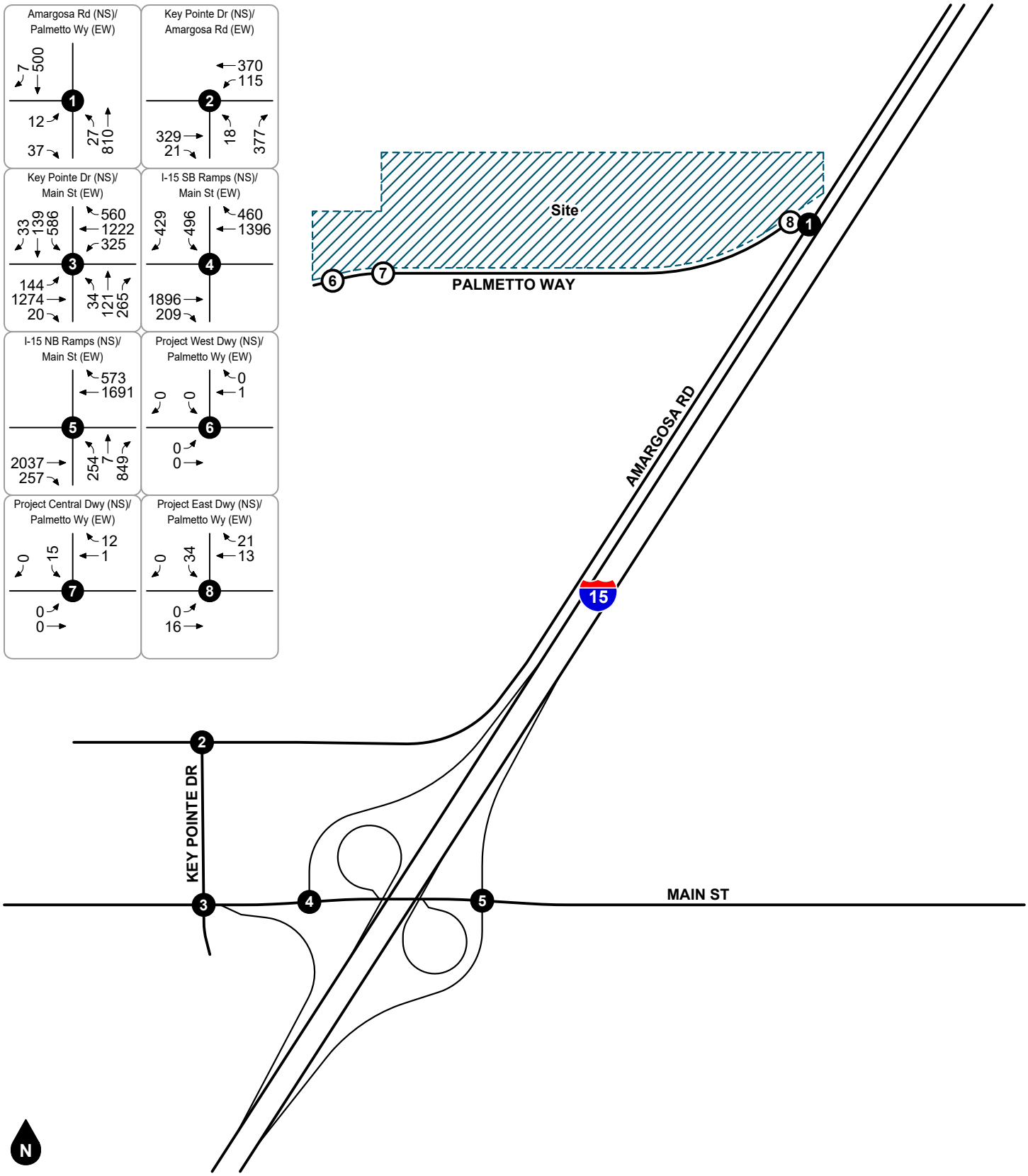


Figure 27
General Plan Buildout (2040) With Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

(#) Project Driveway

Figure 28
General Plan Buildout (2040) With Project
PM Peak Hour Intersection Turning Movement Volumes

6. FUTURE OPERATIONAL ANALYSIS

Detailed intersection Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix D.

OPENING YEAR (2027) WITHOUT PROJECT

The intersection Levels of Service for Opening Year (2027) Without Project conditions are shown in Table 6. As shown in Table 6, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

OPENING YEAR (2027) WITH PROJECT

The intersection Levels of Service for Opening Year (2027) With Project conditions are shown in Table 7. As shown in Table 7, the study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT

The intersection Levels of Service for General Plan Buildout (2040) Without Project conditions are shown in Table 8. As shown in Table 8, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

GENERAL PLAN BUILDOUT (2040) WITH PROJECT

The intersection Levels of Service for General Plan Buildout (2040) With Project conditions are shown in Table 9. As shown in Table 9, the study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

A conceptual striping exhibit for the improvement of a second southbound left turn lane at the intersection of Key Pointe Drive at Main Street (Int. #3) is shown on Figure 29.

The traffic signal would require modification from north-south permitted phasing to protected phasing.

PROJECT FAIR SHARE CONTRIBUTION

Table 10 shows the project fair share contributions and summary of improvements recommended for cumulative conditions. The project fair share contribution is based on the proportion of project peak hour intersection turning movement volumes contributed to the improvement location relative to the total new peak hour intersection turning movement volumes. The intersection fair share cost calculations are typically based on the higher of the AM or PM peak hour traffic volumes. The fair share calculations are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

Note that the existing turning movement volumes are based on the year 2022 traffic counts to most accurately reflect the change in volumes from when existing traffic counts were taken compared to forecasted General Plan Buildout forecast volumes.

Table 6
Opening Year (2027) Without Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	11.0	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	17.1	B	86.1	F
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	10.4	B	15.6	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	6.0	A	14.4	B

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 7
Opening Year (2027) With Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	12.1	B	16.3	C
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.5	A	11.2	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	17.5	B	111.0	F
- With Improvements	TS	14.6	B	31.8	C
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	10.6	B	15.9	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	6.3	A	14.5	B
6. Project West Driveway (NS) at Palmetto Way (EW)	CSS	8.5	A	0.0	A
7. Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8. Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 8
General Plan Buildout (2040) Without Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.0	A	12.5	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	24.9	C	160.2	F
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	8.8	A	12.2	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	8.1	A	13.5	B

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 9
General Plan Buildout (2040) With Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	13.6	B	17.1	C
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	12.9	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	25.6	C	189.5	F
- With Improvements	TS	26.4	C	50.1	D
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	9.0	A	12.3	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	8.2	A	13.6	B
6. Project West Driveway (NS) at Palmetto Way (EW)	CSS	8.5	A	0.0	A
7. Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8. Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 10
Project Fair Share Contribution

Study Intersection	Peak Hour	Intersection Turning Movement Volumes				
		Existing	General Plan Buildout With Project	Project Trips	Total New Trips	Project Share of Total New Trips
3. Key Pointe Drive (NS) at Main Street (EW)	AM	2,083	3,332	75	1,249	6.0%
	PM	3,298	4,723	61	1,425	4.3%

Study Intersection	Improvement
3. Key Pointe Drive (NS) at Main Street (EW)	Construct a second SB left turn lane.



Note: Proof of concept only; not for construction. Final plans shall conform with all applicable CA MUTCD requirements.

Figure 29
Conceptual Striping Plan

7. SITE ACCESS AND CIRCULATION

This section includes a description of project improvements necessary to provide site access and an evaluation of site access and circulation.

PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project as project design features to provide project site access:

- Construct Avenal Street at its ultimate half-section width from the project west terminus to Amargosa Way including landscaping and parkway improvements in conjunction with development, as necessary.

- Construct Palmetto Way at its ultimate half-section width from the project west terminus to Amargosa Way including landscaping and parkway improvements in conjunction with development, as necessary.

- Construct Project West Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:

    - Southbound: one shared left/right turn lane
    - Eastbound: one shared left/through lane
    - Westbound: one shared through/right turn lane

- Construct Project Central Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:

    - Southbound: one shared left/right turn lane
    - Eastbound: one shared left/through lane
    - Westbound: one shared through/right turn lane

- Construct Project East Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:

    - Southbound: one shared left/right turn lane
    - Eastbound: one shared left/through lane
    - Westbound: one shared through/right turn lane

This analysis also assumes the project shall comply with the following conditions as part of the City of Hesperia standard development review process:

- A construction work site traffic control plan shall comply with State standards set forth in the California Manual of Uniform Traffic Control Devices and shall be submitted to the City for review and approval prior to the issuance of a grading permit or start of construction. The plan shall identify any roadway, sidewalk, bike route, or bus stop closures and detours as well as haul routes and hours of operation. All construction related trips shall be restricted to off-peak hours to the extent possible.

- All on-site and off-site roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project shall be constructed in accordance with applicable State/Federal engineering standards and to the satisfaction of the City of Hesperia.

- Site-adjacent roadways shall be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Hesperia.

- Adequate off-street parking shall be provided to the satisfaction of City of Hesperia.

- Adequate emergency vehicle access shall be provided to the satisfaction of the Hesperia Fire Department.

- The final grading, landscaping, and street improvement plans shall demonstrate that sight distance requirements are met in accordance with applicable City of Hesperia/California Department of Transportation sight distance standards.

8. VEHICLES MILES TRAVELED

BACKGROUND

California Senate Bill 743 (SB 743) directed the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The City of Hesperia has established VMT analysis guidelines at this time; therefore, the project-related VMT impact has been assessed based on guidance from the City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020).

SCREENING ASSESSMENT

The City of Hesperia TIA Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory, or projects that are local serving and thus, by definition, reduce VMT by decreasing the number or distance of trips.

The City of Hesperia TIA Guidelines provide the following three screening steps: 1) Transit Priority Area (TPA) Screening; 2) Low VMT Area Screening; and 3) Project Type Screening.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ration (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City Traffic Engineer, with input from the Metropolitan Planning Organization): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool was used to determine if the project is located within a TPA. Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a TPA; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

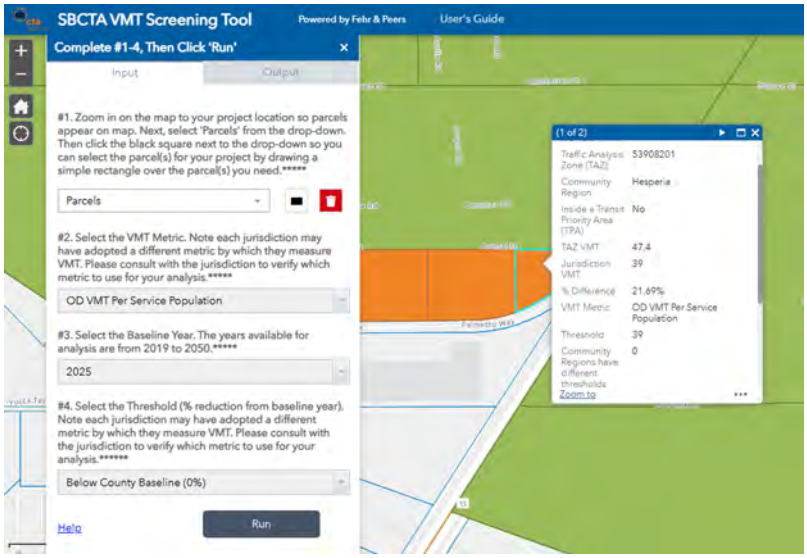
Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

The SBCTA VMT Screening Tool was used assess low VMT area screening for the project. The SBCTA VMT Screening Tool was developed using the SBTAM travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify if a project is in a low VMT-generating area, the appropriate baseline TAZ VMT is compared to the current County of San Bernardino VMT threshold of 39.0 VMT per service population. Additionally, as noted above, the City directs the analyst to identify if the project is consistent with the existing land use within that TAZ and use professional judgement that there is nothing unique about the project that would otherwise be mis-represented utilizing the data from the travel demand model

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 47.4 using OD VMT per service population in the baseline year (2025) compared to the County of San Bernardino VMT threshold of 39.0 OD VMT per service population (+21.69% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria. Attachment A shows the SBCTA VMT Screening Tool results.



Attachment A: SBCTA VMT Screening Tool – OD VMT Per Service Population

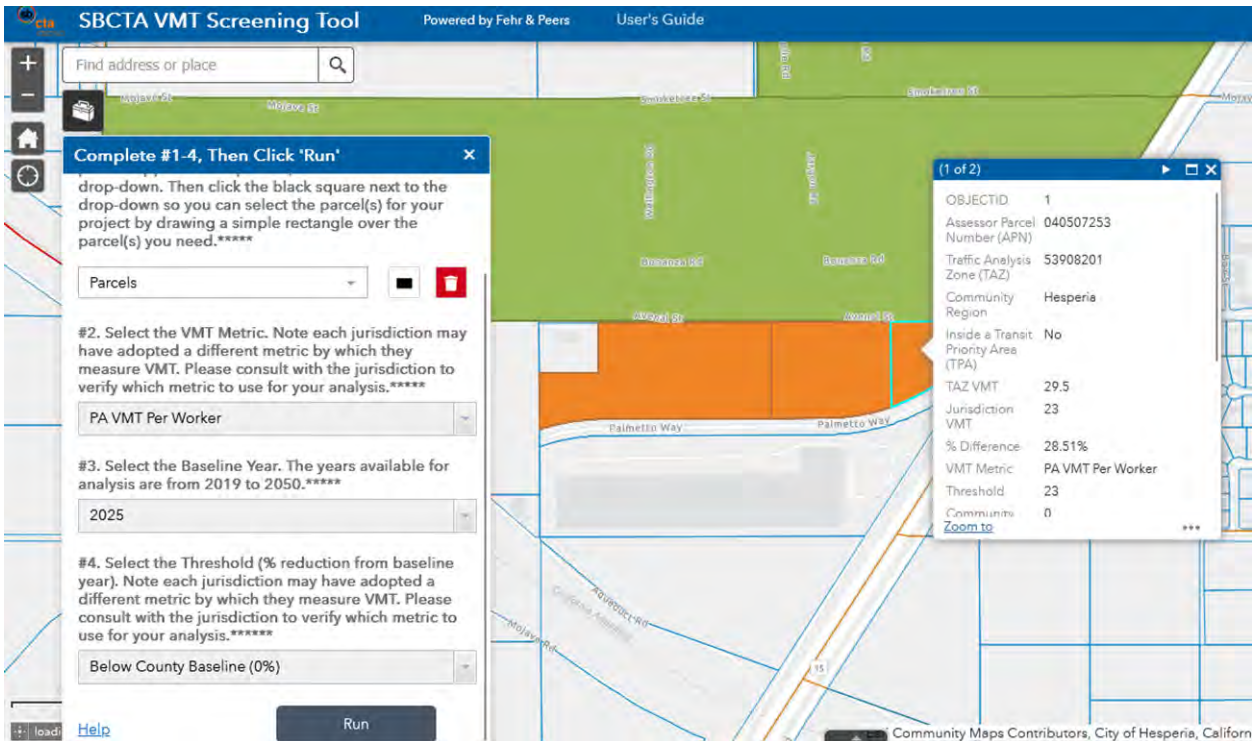
City guidelines state that "In some cases, it may be appropriate to extract the Project-generated VMT using the production-attraction trip matrix. This may be appropriate when a project is entirely composed of retail or office uses, and there is a need to isolate the home-based work (HBW) VMT for purposes of isolating commute VMT. The City should evaluate the appropriate methodology based on the project land use types and context."

The San Bernardino County *Transportation Impact Study Guidelines* (July 2019) states under Section 4.1 (CEQA Assessment – VMT Analysis: Analysis Methodology), "Consistent with OPR guidelines, the following specific components will be utilized to complete a VMT impact assessment:

- Employment Projects – VMT/Employee for only the home-based work trip purpose (attractions) and would apply to office, industrial, governmental, and institutional projects."

The project consists solely of industrial land use. Therefore, all trips to/from the project site are work-based trips and it is appropriate to analyze the project site using the production-attraction trip matrix for VMT per worker, since VMT per worker measures the average (mean) distance a worker drives to work by vehicle in a given period of time.

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 29.5 using PA VMT per worker in the baseline year (2025) compared to the County of San Bernardino VMT average of 23.0 PA VMT per worker (+28.51% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria. Attachment B shows the SBCTA VMT Screening Tool results.



Attachment B: SBCTA VMT Screening Tool – PA VMT Per Worker

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

The following additional uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local serving K-12 schools
- Local parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g. non-destination hotels)
- Local-serving medical
- Student housing projects on or adjacent to college campuses
- Local serving assembly uses (places of worship, community organizations)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects generating less than 110 daily vehicle trips. This generally corresponds to the following "typical" development potentials:
  - 11 single family housing units
  - 16 multi-family, condominiums, or townhouse housing units
  - 10,000 square feet of office
  - 15,000 square feet of light industrial
  - 63,000 square feet of warehousing
  - 79,000 square feet of high-cube transload and short-term storage warehouse

Based on review of project type screening, the proposed project is greater than 63,000 square feet of warehousing; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Screening Assessment Finding

The proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

9. CONCLUSIONS

This section summarizes the findings from the previous sections of this report.

PROJECT TRIP GENERATION

The proposed project is forecast to generate 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

LEVELS OF SERVICE

The study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

VMT ANALYSIS

Based on review of the SBCTA VMT Screening Tool, the proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D Trip Generation Comparison Analysis
Appendix E Level of Service Worksheets
Appendix F SBTAM Model Plots
Appendix G Post-Processing Worksheets

APPENDIX A

GLOSSARY

GLOSSARY OF TERMS

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CONTROL DELAY: The component of delay, typically expressed in seconds per vehicle, resulting from the type of traffic control at an intersection. Control delay is measured by comparison with the uncontrolled condition; it includes delay incurred by slowing down, stopping/waiting, and speeding up.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic travelling at a given speed to radically alter their speed or trajectory. Corner sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 36 inches above the pavement in the center of the nearest approach lane.

CYCLE LENGTH: The time period in seconds required for a traffic signal to complete one full cycle of indications.

CUL-DE-SAC: A local street open at one end only and with special provisions for turning around.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

PASSENGER CAR EQUIVALENT (PCE): A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SHARED/RECIPROCAL PARKING AGREEMENT: A written binding document executed between property owners to provide a designated number of off-street parking stalls within a designated area to be available for specified businesses or land uses.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queueing to occur.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle on the major roadway travelling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 6 inches above the pavement.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination (i.e., each trip has two trip-ends). A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheel base as well as the steering mechanism of the vehicle.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

SCOPING AGREEMENT

Recommended Approval: TKE 06/24/22
Comments on Site Plan excepted

transportation ▪ noise ▪ air quality | **GANDDINI GROUP**

MEMORANDUM OF UNDERSTANDING

TO: CITY OF HESPERIA

FROM: Bryan Crawford, Senior Transportation Planner | GANDDINI GROUP, INC.

DATE: May 23, 2022

SUBJECT: Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis Scoping

INTRODUCTION

The purpose of this traffic study scoping document is to outline the proposed traffic analysis parameters and assumptions for review/concurrence by City of Hesperia staff.

PROJECT DESCRIPTION

Figure 1 shows the project location map. The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as exhibited in Figure 2.

The site plan is show in Appendix A. The 30.52-acre project site is proposed to include a 545,000 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024.

The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 505,665 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE Trip Generation Manual and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD). As shown in Table 1, the proposed project is forecast to generate approximately 1,179 daily PCE trips, including 97 PCE trips during the AM peak hour and 102 PCE trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION

Figure 3 to Figure 6 illustrate the forecast outbound and inbound directional distribution patterns of project-generated truck trips and passenger car trips.

STUDY AREA

Based on the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020) guidelines, intersections identified for analysis typically include signalized intersections at which a project is forecast to contribute 50 or more trips during the AM or PM peak hours. The study area is proposed to consist of the following eight (8) study intersections, even if the project may not contribute 50 or more trips during either peak hour.

Study Intersections (Figure 1)

1. Amargosa Road (NS) at Palmetto Way (EW)
2. Key Pointe Drive (NS) at Amargosa Road (EW)
3. Key Pointe Drive (NS) at Main Street (EW)
4. I-15 SB Offramp (NS) at Main Street (EW)
5. I-15 NB Ramps (NS) at Main Street (EW)
6. Project West Driveway (NS) at Palmetto Way (EW)
7. Project Central Driveway (NS) at Palmetto Way (EW)
8. Project East Driveway (NS) at Palmetto Way (EW)

TRAFFIC COUNTS

Intersection turning movement counts will be used at the study intersections during the AM peak period (7:00 AM – 9:00 AM) and PM peak period (4:00 PM – 6:00 PM) on a typical weekday (Tuesday, Wednesday, or Thursday).

ANALYSIS SCENARIOS

The traffic study shall evaluate the following analysis scenarios for weekday AM and PM peak hour conditions:

- Existing [2022]
- Opening Year Without Project [2024]
- Opening Year With Project [2024]
- General Plan Buildout Without Project [2040]
- General Plan Buildout With Project [2040]

ANALYSIS METHODOLOGY

To assess the performance of an intersection, the [Manager] uses the intersection delay method based on procedures contained in the Highway Capacity Manual (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service (LOS). Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

Intersection Level of Service analysis shall be performed using the Vistro software.

PERFORMANCE STANDARDS

City of Hesperia

The City of Hesperia has established LOS D as the minimum acceptable Level of Service along all City maintained roads (including intersections).

OPERATIONAL THRESHOLDS

City of Hesperia

For study intersections within the City of Hesperia jurisdiction, a traffic impact occurs if:

- The addition of peak hour project generated trips is forecast to cause an intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of peak hour project generated trips worsens the delay at an intersection operating at an unacceptable Level of Service (E or F) in the baseline condition.

If a project is forecast to cause an operational traffic impact, feasible improvements that will reduce the impact to an acceptable LOS are identified. Improvements can be in many forms, including the addition of lanes, traffic control modification, or demand management measures.

FORECASTING METHODOLOGY

Ambient Growth Rate

To account for area-wide ambient growth, the Opening Year 2024 will include a 2% annual growth for 2 years (total growth factor = 1.04) over the 2022 base volumes. City staff shall confirm that this growth rate is applicable and refine as necessary.

Other Cumulative Projects

A list of pending and approved cumulative development projects will be obtained from Cities of Hesperia and Victorville staff. This list will be narrowed down to include projects within a 1.5 mile radius of the project site.

Trip forecasts for other development projects within the project study area will be determined based on the Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition, 2021 and will be added to existing roadway volumes for the applicable analysis scenarios.

General Plan Buildout Volume Forecasts

Year 2040 traffic volume forecasts will be obtained from the current San Bernardino Transportation Analysis Model (SBTAM). Ganddini Group shall perform post-processing procedures to calculate the growth increment between the base year model volumes and the Year 2040 forecast model volumes to be added to current year traffic volumes. Weekday AM and PM peak hour link volumes shall be converted to turning movement volumes using the "b-turns" program. Year 2040 With Project conditions will be determined by manually adding project trips to the baseline Year 2040 forecast.

VEHICLES MILES TRAVELED (VMT) ANALYSIS

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Agencies are required to apply the updated CEQA guidelines for VMT analysis and implementation was required State-wide by July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) ["Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The City of Hesperia has established VMT analysis guidelines at this time; therefore, the project-related VMT impact has been assessed based on guidance from the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020).

VMT Screening Assessment

The project VMT impact has been assessed in accordance with guidance from the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020).

The City of Hesperia TIA Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory, or projects that are local serving and thus, by definition, reduce VMT by decreasing the number or distance of trips.

The City of Hesperia TIA Guidelines provide the following three screening steps: 1) Transit Priority Area (TPA) Screening; 2) Low VMT Area Screening; and 3) Project Type Screening.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ration (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City Traffic Engineer, with input from the Metropolitan Planning Organization): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool was used to determine if the project is located within a TPA. Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a TPA; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

The SBCTA VMT Screening Tool was used assess low VMT area screening for the project. The SBCTA VMT Screening Tool was developed using the SBTAM travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify if a project is in a low VMT-generating area, the appropriate baseline TAZ VMT is compared to the current County of San Bernardino VMT threshold of 33.3 VMT per service population. Additionally, as noted above, the City directs the analyst to identify if the project is consistent with the existing land use within that

TAZ and use professional judgement that there is nothing unique about the project that would otherwise be mis-represented utilizing the data from the travel demand model

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 72.1 using OD VMT per service population in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 33.3 OD VMT per service population (116.32% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

However, City guidelines state that "In some cases, it may be appropriate to extract the Project-generated VMT using the production-attraction trip matrix. This may be appropriate when a project is entirely composed of retail or office uses, and there is a need to isolate the home-based work (HBW) VMT for purposes of isolating commute VMT. The City should evaluate the appropriate methodology based on the project land use types and context."

The San Bernardino County Transportation Impact Study Guidelines (July 9, 2019) states under Section 4.1 (CEQA Assessment – VMT Analysis: Analysis Methodology), "Consistent with OPR guidelines, the following specific components will be utilized to complete a VMT impact assessment:

- Employment Projects – VMT/Employee for only the home-based work trip purpose (attractions) and would apply to office, industrial, governmental, and institutional projects."

The project is an 100% industrial land use. Therefore, all trips to/from the project site are work-based trips. Therefore, it is appropriate to analyze the project site using the production-attraction trip matrix for VMT per worker, since VMT per worker measures the average (mean) distance a worker drives to work by vehicle in a given period of time.

Based on review of the SBCTA VMT Screening Tool, the proposed project is located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 13.3 using PA VMT per worker in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 16.9 PA VMT per worker (-21.6% difference); therefore, the proposed project can be presumed to result in a less than significant VMT impact under this screening criteria.

Although the City of Hesperia guidelines state that the appropriate baseline project TAZ OD VMT per service population should be compared to the baseline County of San Bernardino OD VMT per service population, Ganddini Group, Inc. recommends an exemption be applied to this project based on the project TAZ characteristics as identified, and guidance from San Bernardino County regarding the method for evaluating VMT for industrial projects.

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

The following additional uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local serving K-12 schools
- Local parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g. non-destination hotels)
- Local-serving medical
- Student housing projects on or adjacent to college campuses
- Local serving assembly uses (places of worship, community organizations)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects generating less than 110 daily vehicle trips. This generally corresponds to the following "typical" development potentials:
  - 11 single family housing units
  - 16 multi-family, condominiums, or townhouse housing units
  - 10,000 square feet of office
  - 15,000 square feet of light industrial
  - 63,000 square feet of warehousing
  - 79,000 square feet of high-cube transload and short-term storage warehouse

Based on review of project type screening, the proposed project is greater than 63,000 square feet of warehousing; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Screening Assessment Finding

The proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

Although the City of Hesperia guidelines state that the appropriate baseline project TAZ OD VMT per service population should be compared to the baseline County of San Bernardino OD VMT per service population, the project is considered to be in a low VMT generating area based on the PA VMT per worker metric within the SBCTA VMT Screening Tool. PA VMT per worker is the appropriate metric when evaluating industrial projects according to the County of San Bernardino guidelines.

This recommended exemption is based on review of the SBCTA VMT Screening Tool, the proposed project is located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 13.3 using PA VMT per worker in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 16.9 PA VMT per worker (-21.6% difference); therefore, the proposed project can be presumed to result in a less than significant VMT impact under this screening criteria.

Thus, it appears that the project does meet the intent for the screening criteria for low-VMT generating areas, as specified within the Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) ["Technical Advisory"] and San Bernardino County Transportation Impact Study Guidelines (July 9, 2019)

Ganddini Group, Inc. recommends a detailed VMT analysis exemption be applied to this project based on the project TAZ characteristics as identified, and guidance from San Bernardino County and OPR regarding the method for evaluating VMT for residential projects.

CONCLUSION

We appreciate the opportunity to provide this scoping document for your review. Should you have any questions or comments regarding the proposed scope, please contact Bryan Crawford at (714) 795-3100 x 104 or bryan@ganddini.com.

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 545.000 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	57	14	71	32	50	82	861
Trucks							
2-Axle Trucks	1	1	2	1	1	2	21
3-Axle Trucks	1	1	2	1	1	2	26
4+ Axle Trucks	3	3	6	2	2	4	78
Subtotal	5	5	10	4	4	8	125
Total Vehicle Trips Generated	**62**	**19**	**81**	**36**	**54**	**90**	**986**

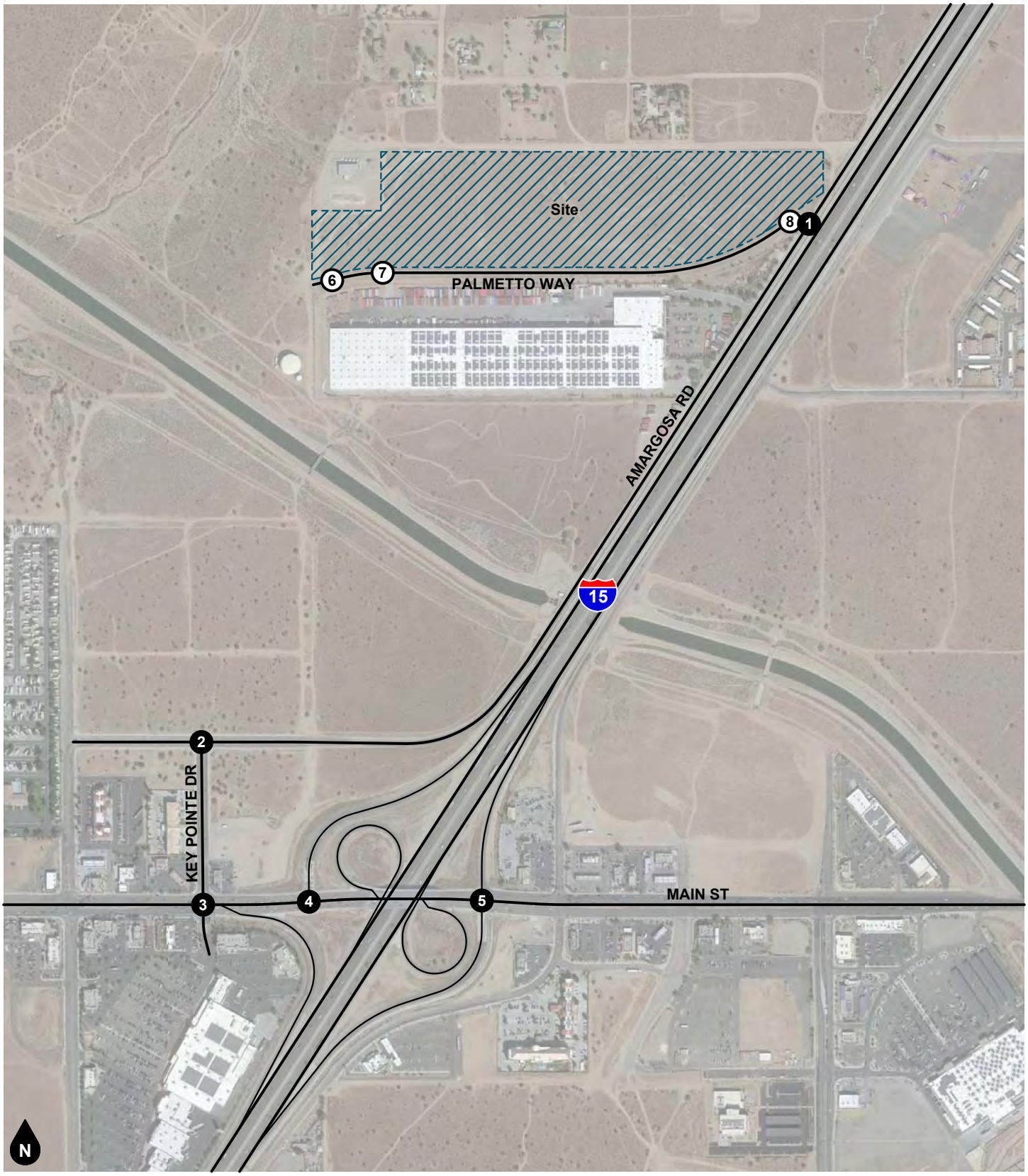
PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	57	14	71	32	50	82	861
Trucks								
2-Axle Trucks	1.5	2	2	4	2	2	4	32
3-Axle Trucks	2.0	2	2	4	2	2	4	52
4+ Axle Trucks	3.0	9	9	18	6	6	12	234
Subtotal		13	13	26	10	10	20	318
Total PCE Trips Generated		**70**	**27**	**97**	**42**	**60**	**102**	**1,179**

Notes:
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.



Legend

(#) Study Intersection

(#) Project Driveway

Figure 1
Project Location Map

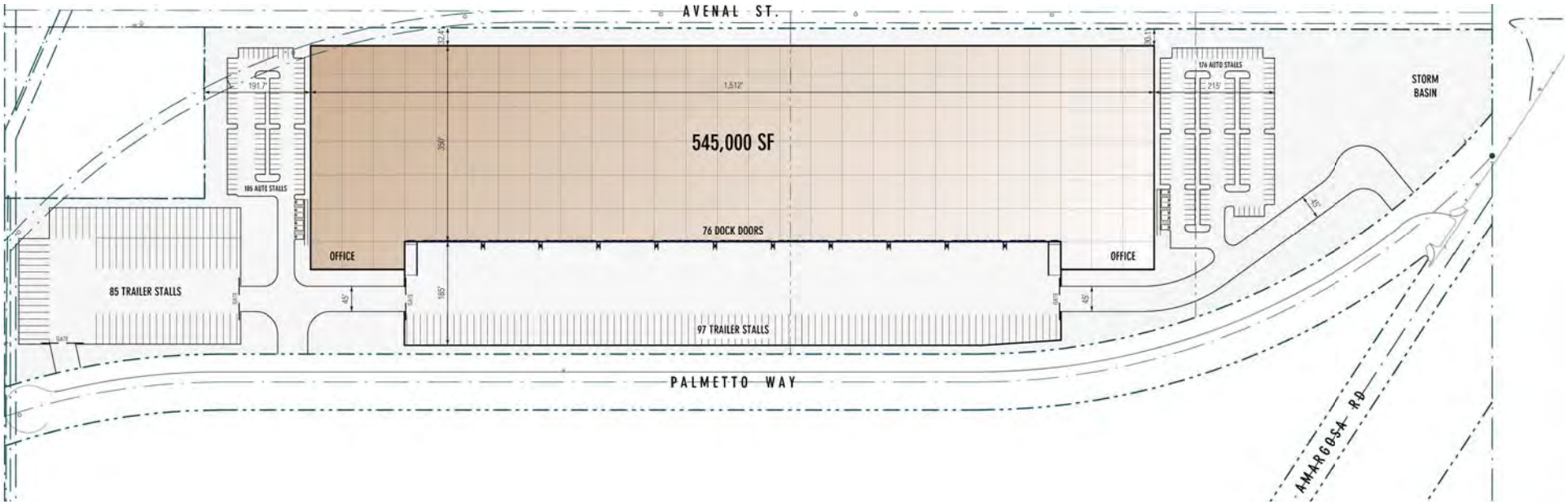


Figure 2
Site Plan

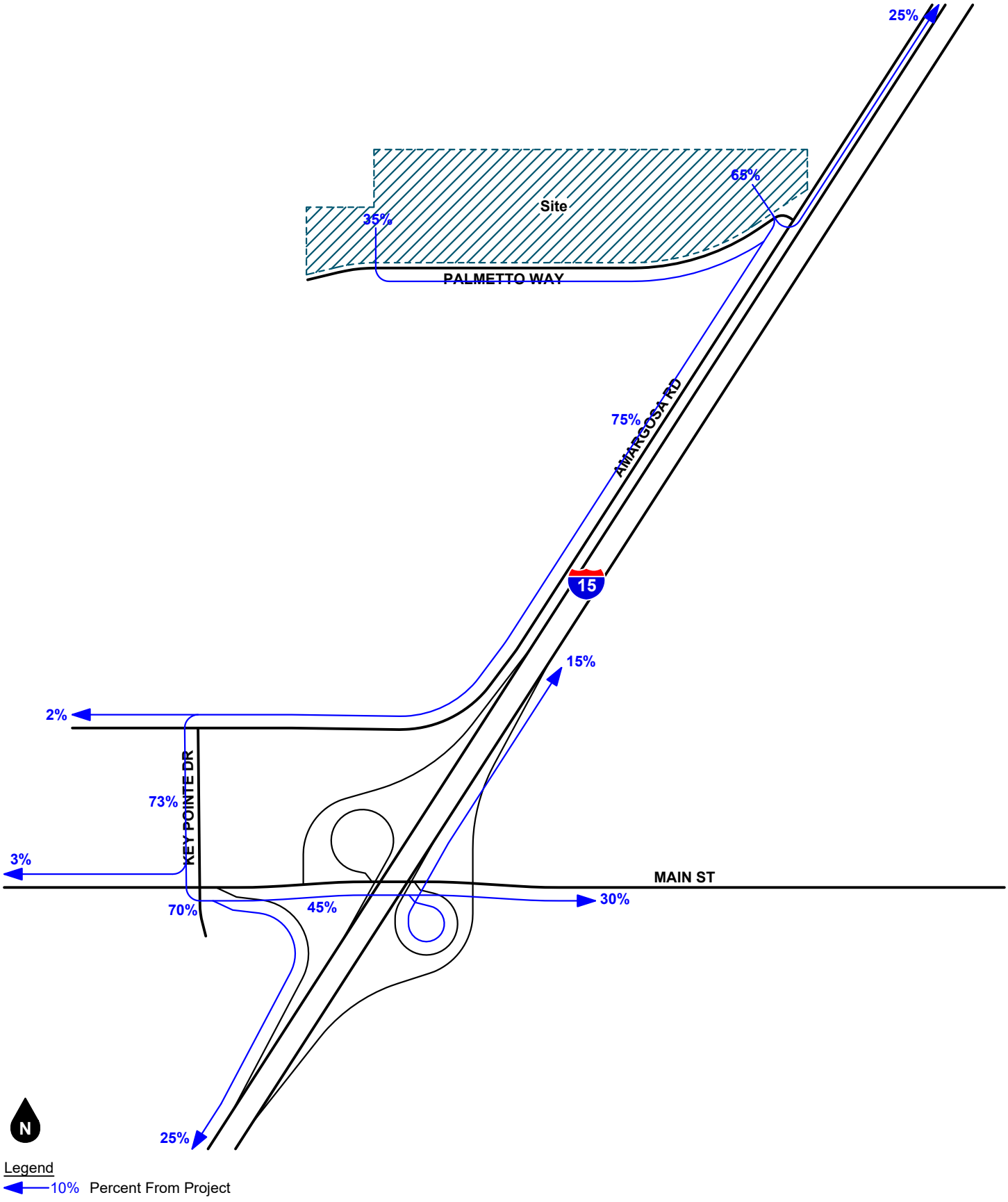


Figure 3
Project Outbound Trip Distribution - Cars

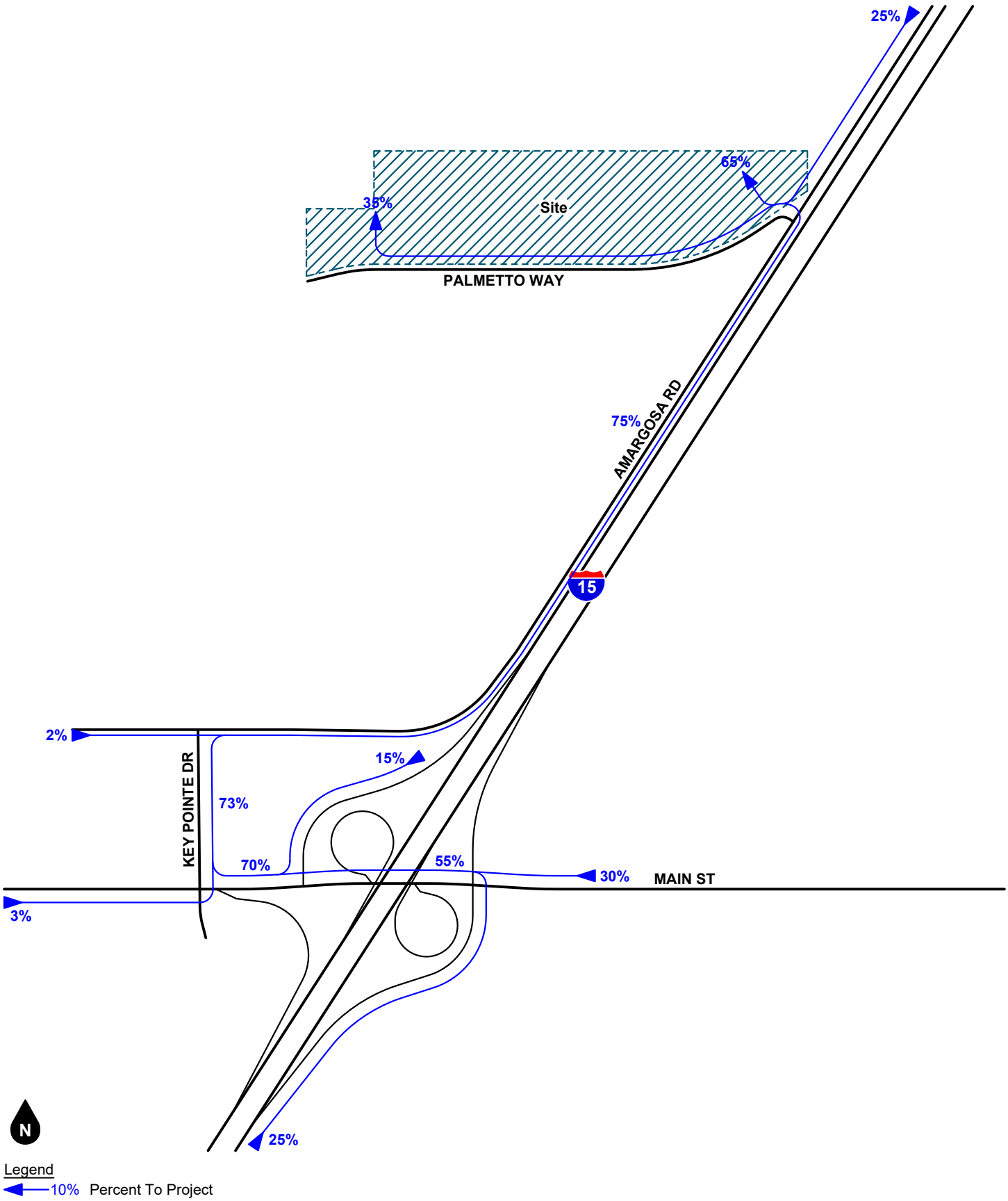


Figure 4
Project Inbound Trip Distribution - Cars

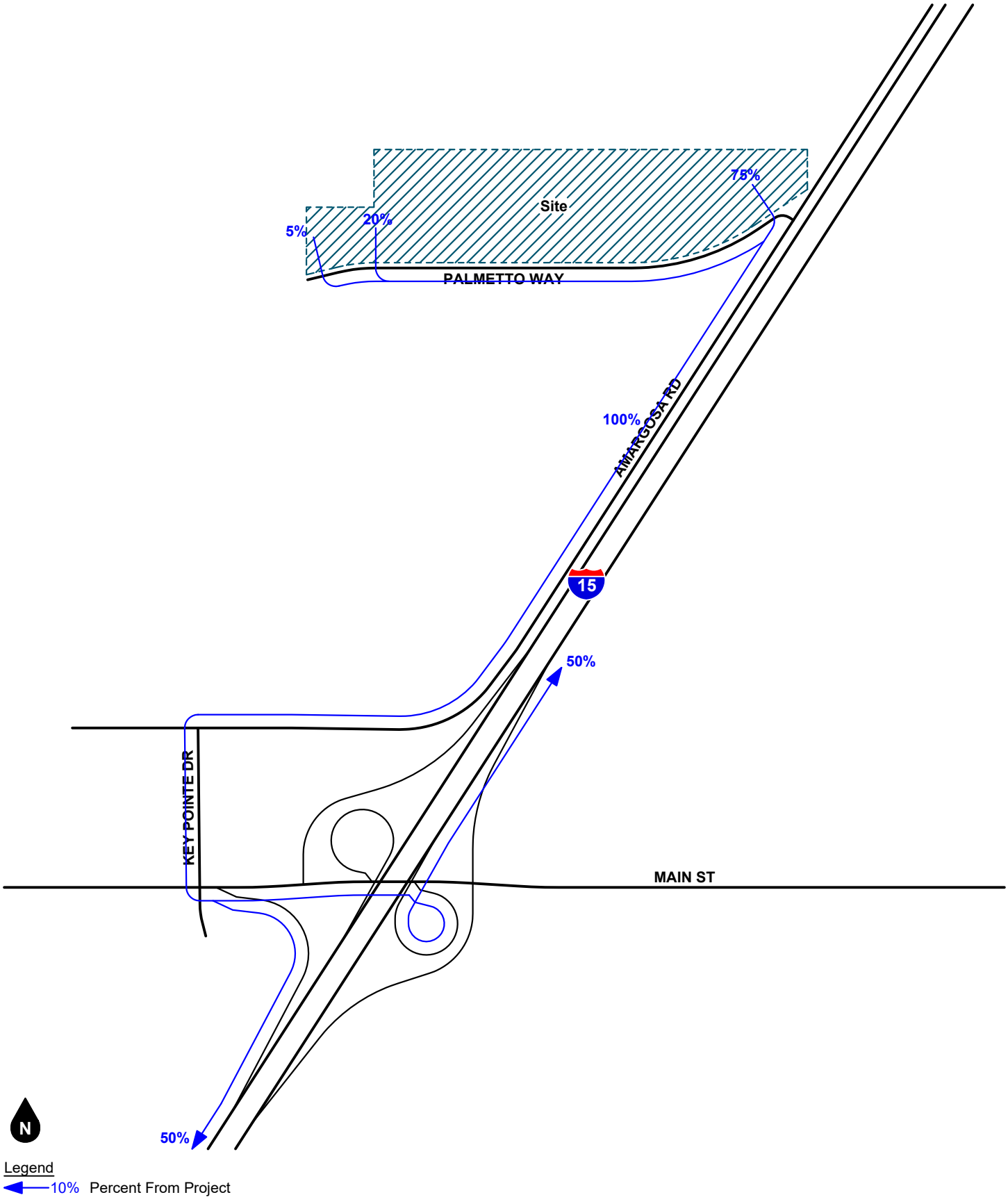


Figure 5
Project Outbound Trip Distribution - Trucks

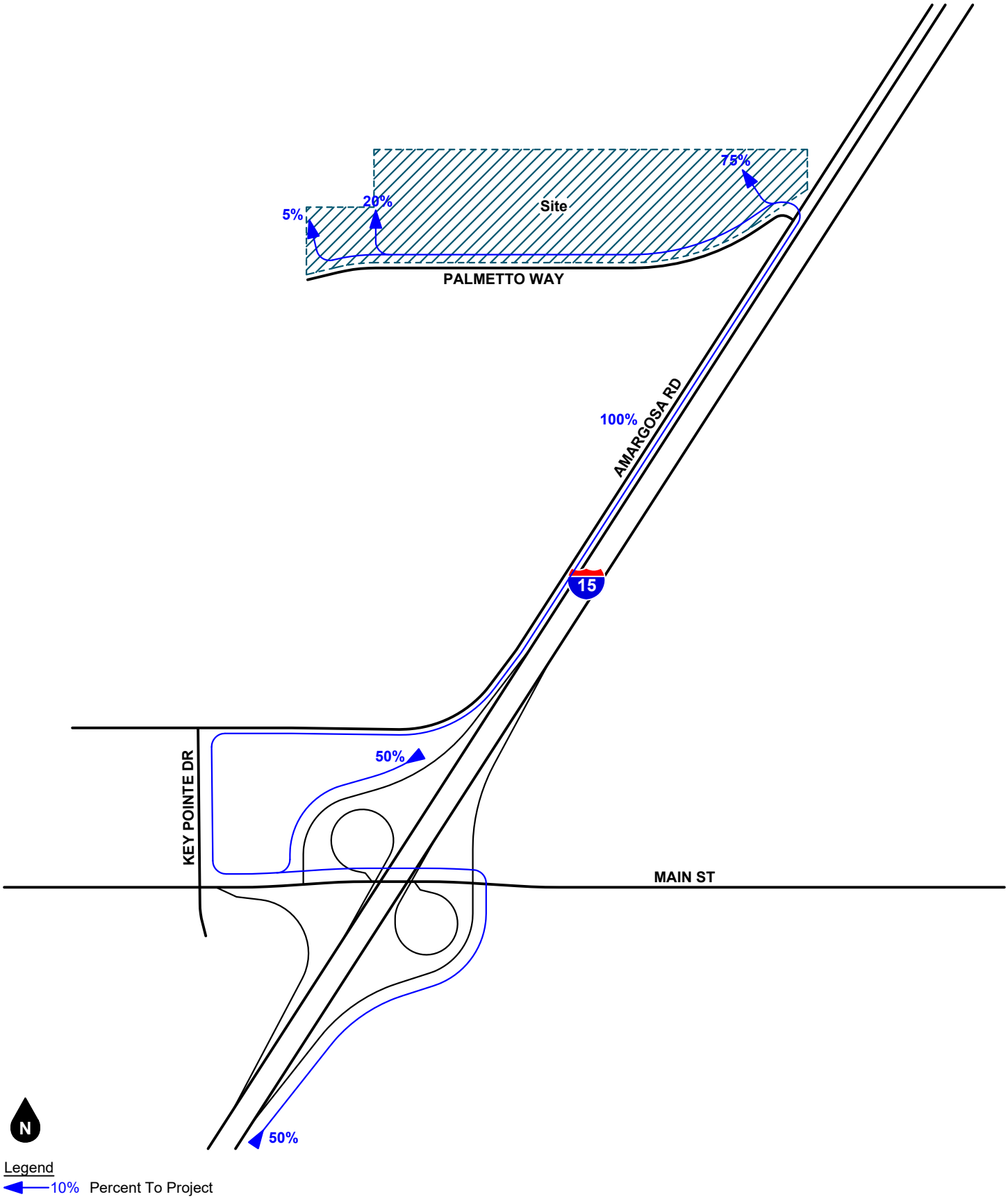


Figure 6
Project Inbound Trip Distribution - Trucks

Appendix A

Site Plan

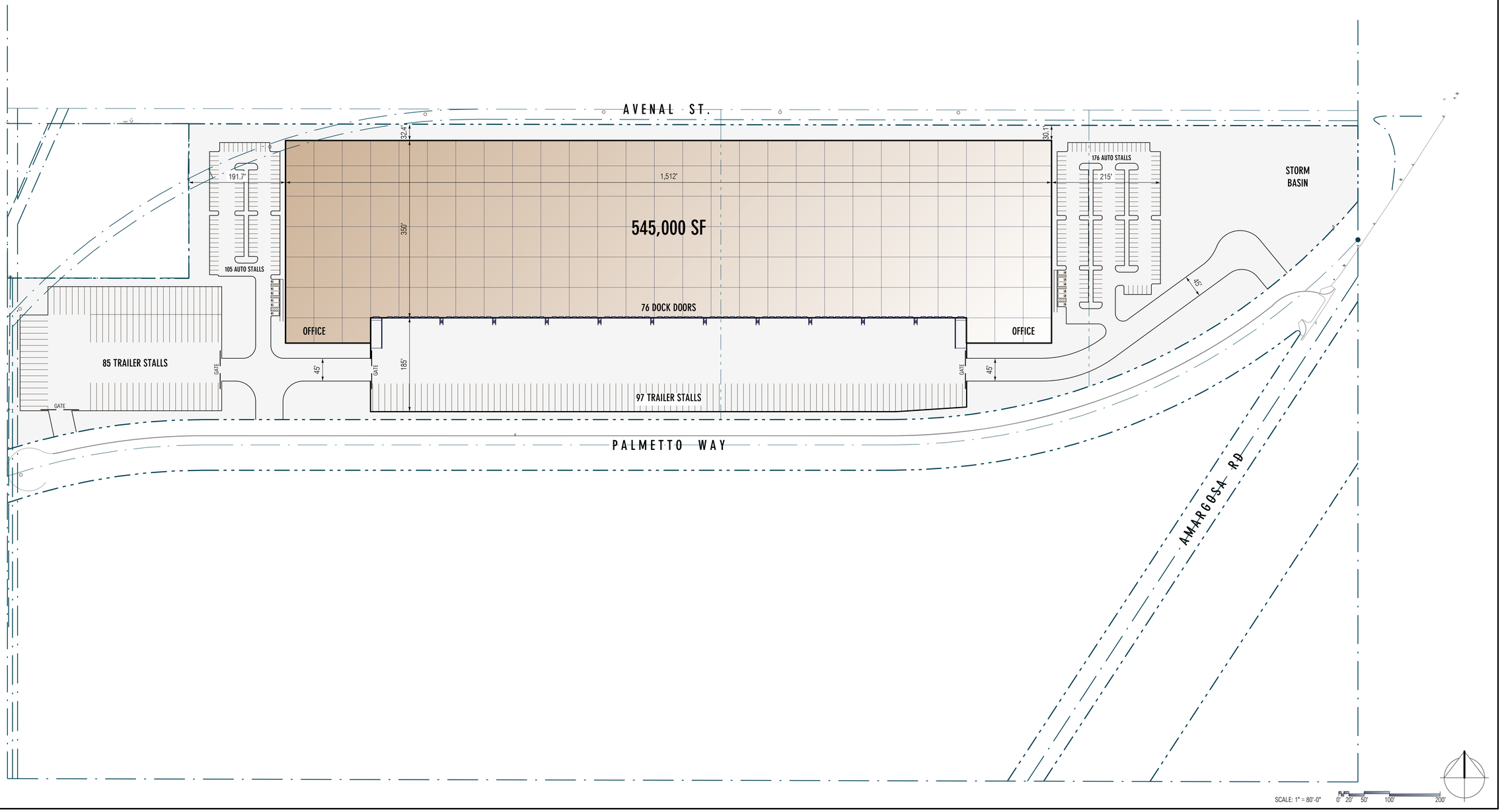
PROJECT DATA:

ZONE:

APPROX. SITE AREA: 1,329,521 SF
30.52 AC

BUILDING AREA: 545,000 SF

COVERAGE: 41.0 %



RGA
Office of Architectural Design
15231 Alton Parkway, Suite 100
Irvine, CA 92618
T 949-341-0920
FX 949-341-0922

SPEC. INDUSTRIAL

PALMETTO WAY - HESPERIA, CA

PRELIMINARY SITE PLAN - SCHEME 02

MARK	DATE	DESCRIPTION
	7/19/21	CONCEPTUAL SITE PLAN

RGA PROJECT NO:	21073.00
CAD FILE NAME:	21073-00-A1-03
DRAWN BY:	CS
CHK'D BY:	CS
COPYRIGHT: RGA, OFFICE OF ARCHITECTURAL DESIGN	
SHEET TITLE	

A1-03

APPENDIX C

VOLUME COUNT WORKSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Wed, May 25, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	Amargosa	LOCATION #:	1	
	EAST & WEST:	Palmeto	CONTROL:	STOP E	

NOTES:

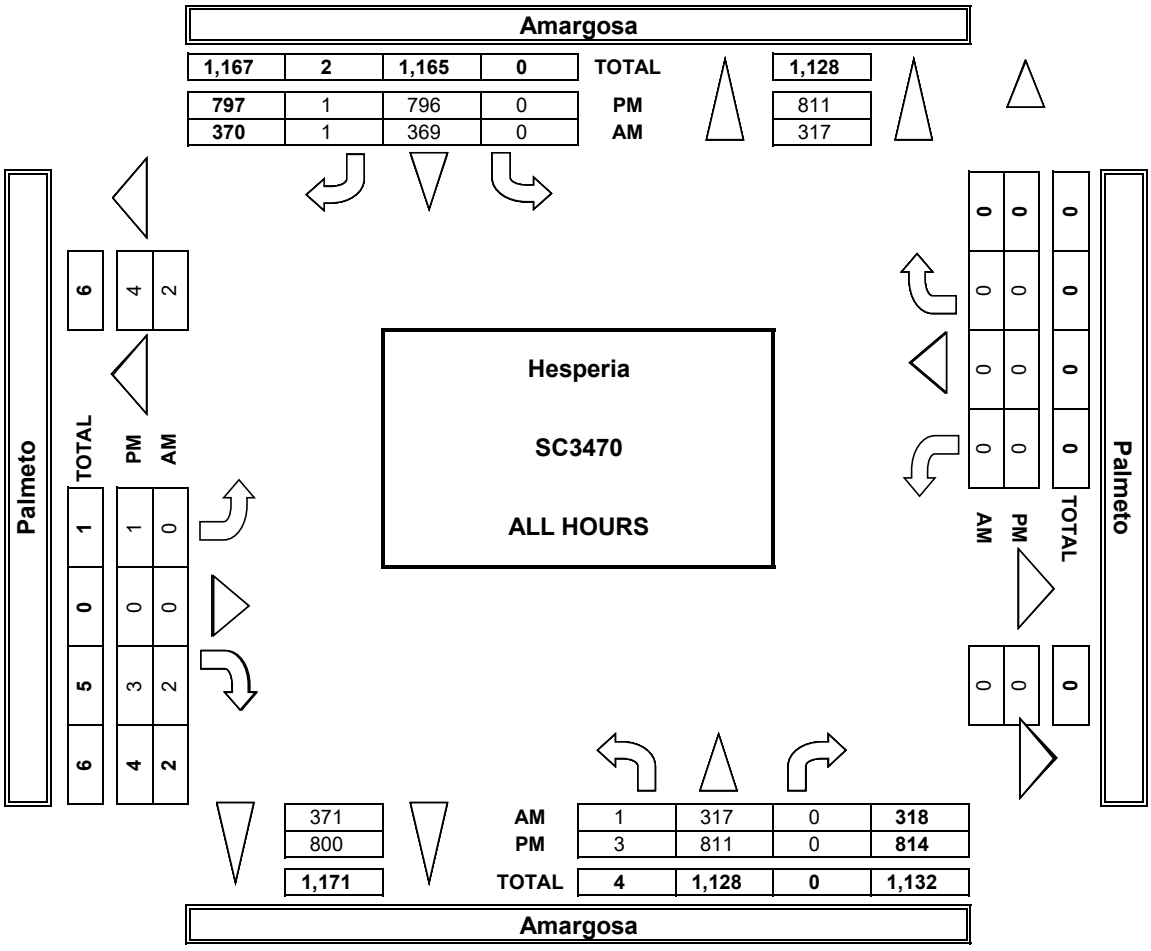
AM / PM / MD / OTHER / OTHER

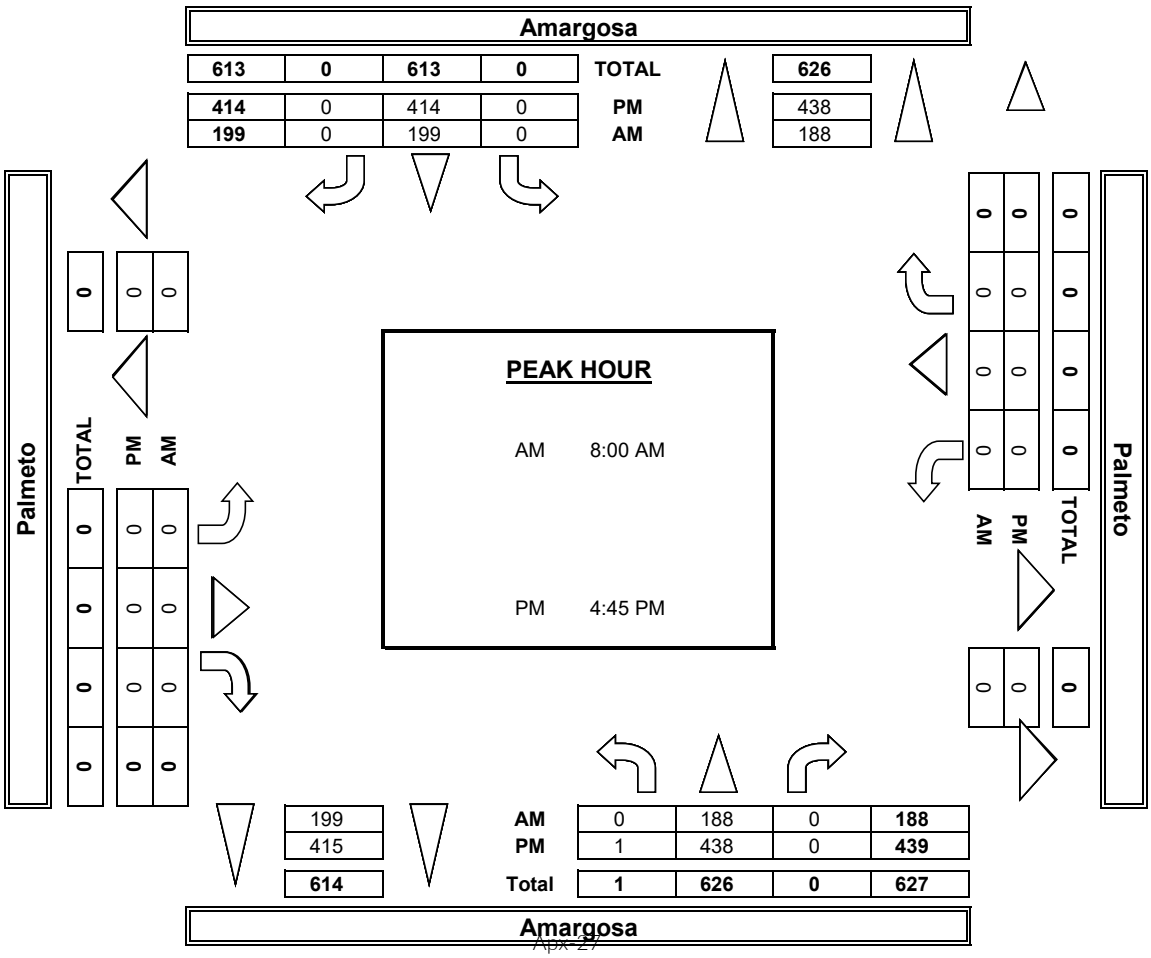
▲ N ◄ W E ► S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto			
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	31	0	0	34	0	0	0	0	0	0	0	65
	7:15 AM	0	24	0	0	43	1	0	0	1	0	0	0	69
	7:30 AM	1	26	0	0	48	0	0	0	1	0	0	0	76
	7:45 AM	0	48	0	0	45	0	0	0	0	0	0	0	93
	8:00 AM	0	36	0	0	43	0	0	0	0	0	0	0	79
	8:15 AM	0	38	0	0	71	0	0	0	0	0	0	0	109
	8:30 AM	0	62	0	0	36	0	0	0	0	0	0	0	98
	8:45 AM	0	52	0	0	49	0	0	0	0	0	0	0	101
	VOLUMES	1	317	0	0	369	1	0	0	2	0	0	0	690
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
	APP/DEPART	318	/	317	370	/	371	2	/	0	0	/	2	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	188	0	0	199	0	0	0	0	0	0	0	387
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.758			0.701			0.000			0.000		0.888
	APP/DEPART	188	/	188	199	/	199	0	/	0	0	/	0	0
PM	04:00 PM	1	102	0	0	88	0	0	0	3	0	0	0	194
	4:15 PM	1	91	0	0	98	0	0	0	0	0	0	0	190
	4:30 PM	0	96	0	0	103	1	1	0	0	0	0	0	201
	4:45 PM	0	96	0	0	108	0	0	0	0	0	0	0	204
	5:00 PM	0	131	0	0	102	0	0	0	0	0	0	0	233
	5:15 PM	0	92	0	0	112	0	0	0	0	0	0	0	204
	5:30 PM	1	119	0	0	92	0	0	0	0	0	0	0	212
	5:45 PM	0	84	0	0	93	0	0	0	0	0	0	0	177
	VOLUMES	3	811	0	0	796	1	1	0	3	0	0	0	1,615
	APPROACH %	0%	100%	0%	0%	100%	0%	25%	0%	75%	0%	0%	0%	
	APP/DEPART	814	/	811	797	/	800	4	/	0	0	/	4	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	1	438	0	0	414	0	0	0	0	0	0	0	853
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.838			0.924			0.000			0.000		0.915
	APP/DEPART	439	/	438	414	/	415	0	/	0	0	/	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2					

	NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto			
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL
7:00 AM	0	33	0	0	34	0	0	0	0	0	0	0	67
7:15 AM	0	25	0	0	47	1	0	0	1	0	0	0	73
7:30 AM	1	27	0	0	52	0	0	0	1	0	0	0	81
7:45 AM	0	52	0	0	47	0	0	0	0	0	0	0	99
8:00 AM	0	39	0	0	45	0	0	0	0	0	0	0	84
8:15 AM	0	39	0	0	76	0	0	0	0	0	0	0	115
8:30 AM	0	65	0	0	36	0	0	0	0	0	0	0	101
8:45 AM	0	54	0	0	52	0	0	0	0	0	0	0	105
AM VOLUMES	1	333	0	0	388	1	0	0	2	0	0	0	724
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
APP/DEPART	334	/	333	389	/	390	2	/	0	0	/	2	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	197	0	0	208	0	0	0	0	0	0	0	405
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.756			0.684			0.000			0.000		0.879
APP/DEPART	197	/	197	208	/	208	0	/	0	0	/	0	0
04:00 PM	1	104	0	0	90	0	0	0	4	0	0	0	198
4:15 PM	1	95	0	0	100	0	0	0	0	0	0	0	196
4:30 PM	0	101	0	0	106	1	1	0	0	0	0	0	209
4:45 PM	0	97	0	0	108	0	0	0	0	0	0	0	205
5:00 PM	0	134	0	0	103	0	0	0	0	0	0	0	236
5:15 PM	0	94	0	0	114	0	0	0	0	0	0	0	207
5:30 PM	1	119	0	0	93	0	0	0	0	0	0	0	213
5:45 PM	0	86	0	0	93	0	0	0	0	0	0	0	179
PM VOLUMES	3	828	0	0	805	1	1	0	4	0	0	0	1,642
APPROACH %	0%	100%	0%	0%	100%	0%	20%	0%	80%	0%	0%	0%	
APP/DEPART	831	/	829	806	/	809	5	/	0	0	/	4	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	1	443	0	0	417	0	0	0	0	0	0	0	861
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.831			0.917			0.000			0.000		0.912
APP/DEPART	444	/	443	417	/	417	0	/	0	0	/	1	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	28	0	0	34	0	0	0	0	0	0	0	62	0	0	0	0	0
7:15 AM	0	23	0	0	40	1	0	0	1	0	0	0	65	0	0	0	0	0
7:30 AM	1	24	0	0	43	0	0	0	1	0	0	0	69	0	0	0	0	0
7:45 AM	0	42	0	0	42	0	0	0	0	0	0	0	84	0	0	0	0	0
8:00 AM	0	34	0	0	40	0	0	0	0	0	0	0	74	0	0	0	0	0
8:15 AM	0	36	0	0	65	0	0	0	0	0	0	0	101	0	0	0	0	0
8:30 AM	0	59	0	0	36	0	0	0	0	0	0	0	95	0	0	0	0	0
8:45 AM	0	49	0	0	47	0	0	0	0	0	0	0	96	0	0	0	0	0
VOLUMES	1	295	0	0	347	1	0	0	2	0	0	0	646	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
APP/DEPART	296	/	295	348	/	349	2	/	0	0	/	2	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	178	0	0	188	0	0	0	0	0	0	0	366					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.754			0.723			0.000			0.000		0.906					
APP/DEPART	178	/	178	188	/	188	0	/	0	0	/	0	0					
PM																		
04:00 PM	1	100	0	0	85	0	0	0	1	0	0	0	187	0	0	0	0	0
4:15 PM	1	86	0	0	95	0	0	0	0	0	0	0	182	0	0	0	0	0
4:30 PM	0	90	0	0	100	1	1	0	0	0	0	0	192	0	0	1	0	1
4:45 PM	0	94	0	0	108	0	0	0	0	0	0	0	202	0	0	0	0	0
5:00 PM	0	127	0	0	101	0	0	0	0	0	0	0	228	0	0	0	0	0
5:15 PM	0	89	0	0	109	0	0	0	0	0	0	0	198	0	0	0	0	0
5:30 PM	1	119	0	0	91	0	0	0	0	0	0	0	211	1	0	0	0	1
5:45 PM	0	81	0	0	93	0	0	0	0	0	0	0	174	0	0	0	0	0
VOLUMES	3	786	0	0	782	1	1	0	1	0	0	0	1,574	1	0	1	0	2
APPROACH %	0%	100%	0%	0%	100%	0%	50%	0%	50%	0%	0%	0%						
APP/DEPART	789	/	786	783	/	784	2	/	0	0	/	4	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	429	0	0	409	0	0	0	0	0	0	0	839					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.846			0.938			0.000			0.000		0.920					
APP/DEPART	430	/	429	409	/	410	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

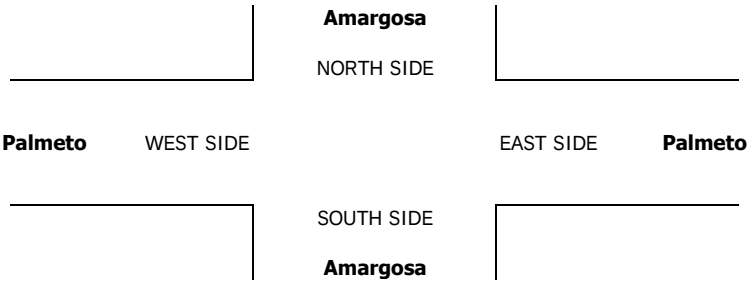
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
	7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	7:30 AM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	7:45 AM	0	4	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
	8:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:15 AM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	8:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:45 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	VOLUMES	0	17	0	0	15	0	0	0	0	0	0	0	32	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	17	/	17	15	/	15	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	7	0	0	8	0	0	0	0	0	0	0	15					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.583			0.500			0.000			0.000		0.625					
	APP/DEPART	7	/	7	8	/	8	0	/	0	0	/	0	0					
PM	04:00 PM	0	1	0	0	3	0	0	0	2	0	0	0	6	0	0	0	0	0
	4:15 PM	0	4	0	0	3	0	0	0	0	0	0	0	7	0	0	0	0	0
	4:30 PM	0	4	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
	4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	5:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	6	0	0	0	0	0
	5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
	VOLUMES	0	20	0	0	13	0	0	0	2	0	0	0	35	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	20	/	20	13	/	15	2	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	8	0	0	5	0	0	0	0	0	0	0	13					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.667			0.417			0.000			0.000		0.542					
	APP/DEPART	8	/	8	5	/	5	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	04:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	4	/	4	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	2	0	0	2	0	0	0	0	0	0	0	4					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.500			0.000			0.000		1.000					
	APP/DEPART	2	/	2	2	/	2	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

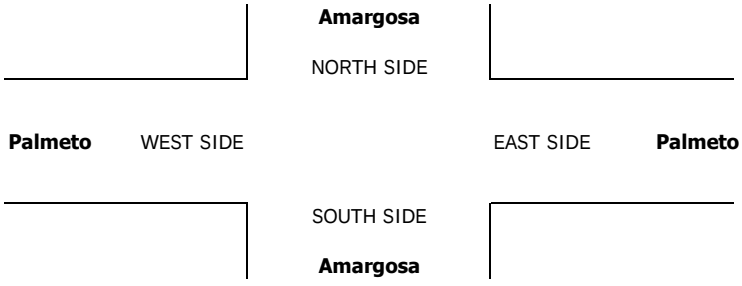
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	3	/	3	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.250			0.000			0.000		0.500					
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1					
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250					
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Wed, May 25, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	Key Pointe	LOCATION #:	4	
	EAST & WEST:	Amargosa	CONTROL:	STOP N	

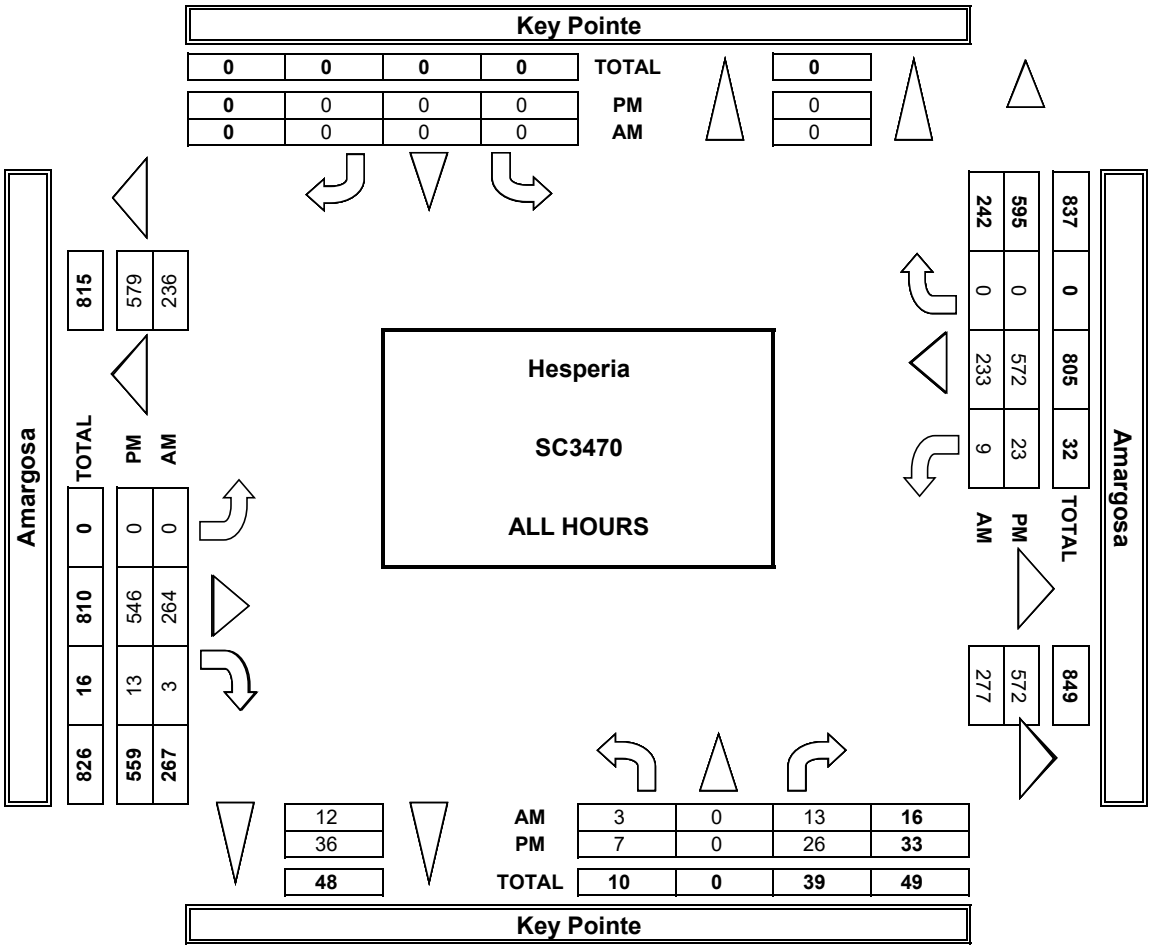
NOTES:

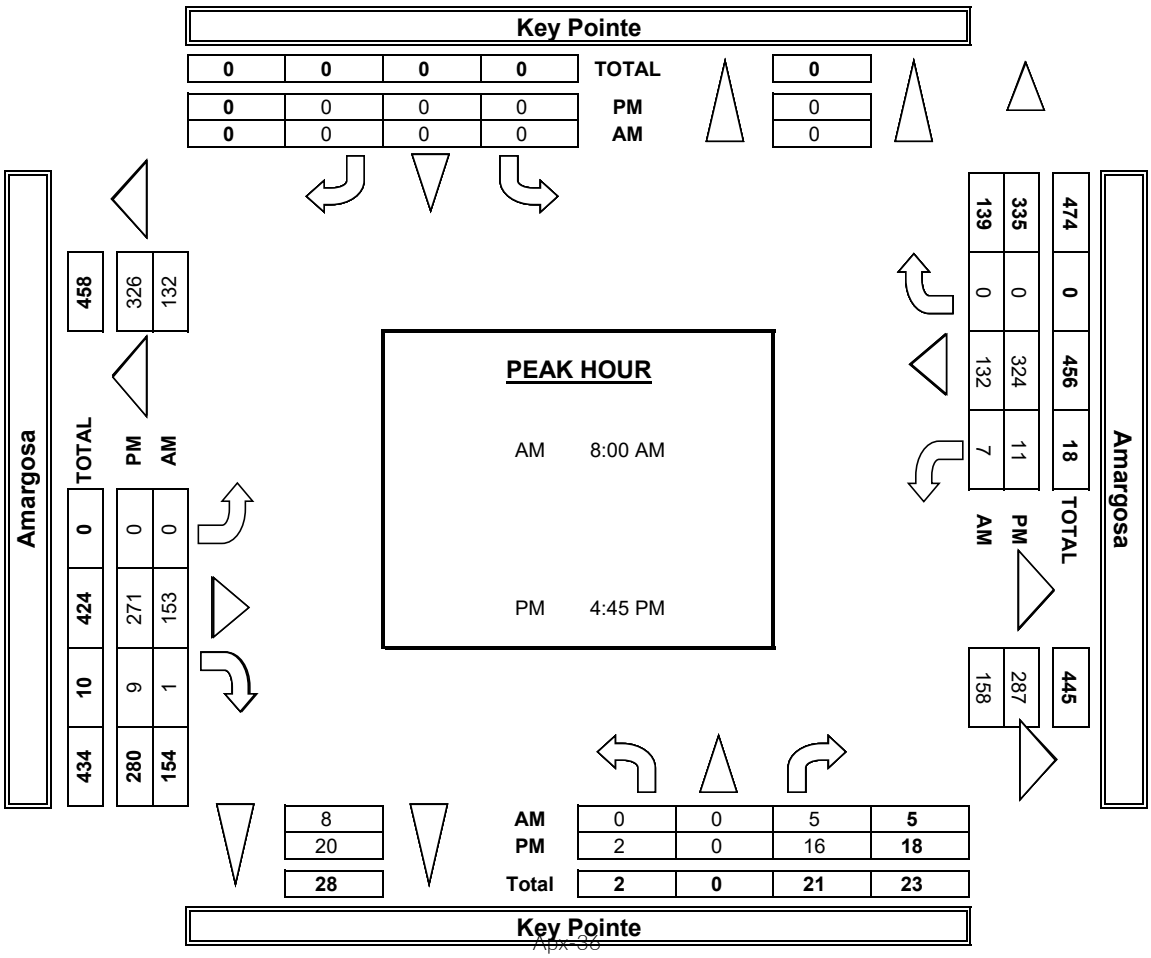
AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa			
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL
AM	7:00 AM	2	0	1	0	0	0	0	22	0	0	26	0	51
	7:15 AM	0	0	2	0	0	0	0	20	0	1	21	0	44
	7:30 AM	0	0	3	0	0	0	0	39	1	1	22	0	66
	7:45 AM	1	0	2	0	0	0	0	30	1	0	32	0	66
	8:00 AM	0	0	1	0	0	0	0	33	1	3	18	0	56
	8:15 AM	0	0	0	0	0	0	0	58	0	4	25	0	87
	8:30 AM	0	0	3	0	0	0	0	28	0	0	51	0	82
	8:45 AM	0	0	1	0	0	0	0	34	0	0	38	0	73
	VOLUMES	3	0	13	0	0	0	0	264	3	9	233	0	525
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	99%	1%	4%	96%	0%	
	APP/DEPART	16	/	0	0	/	12	267	/	277	242	/	236	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	5	0	0	0	0	153	1	7	132	0	298
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%	
	PEAK HR FACTOR		0.417			0.000			0.664			0.681		0.856
	APP/DEPART	5	/	0	0	/	8	154	/	158	139	/	132	0
PM	04:00 PM	3	0	3	0	0	0	0	62	2	4	61	0	135
	4:15 PM	0	0	2	0	0	0	0	73	0	3	59	0	137
	4:30 PM	1	0	4	0	0	0	0	73	2	4	69	0	153
	4:45 PM	0	0	3	0	0	0	0	71	5	2	77	0	158
	5:00 PM	0	0	4	0	0	0	0	65	1	2	97	0	169
	5:15 PM	0	0	3	0	0	0	0	70	3	2	65	0	143
	5:30 PM	2	0	6	0	0	0	0	65	0	5	85	0	163
	5:45 PM	1	0	1	0	0	0	0	67	0	1	59	0	129
	VOLUMES	7	0	26	0	0	0	0	546	13	23	572	0	1,187
	APPROACH %	21%	0%	79%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
	APP/DEPART	33	/	0	0	/	36	559	/	572	595	/	579	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	2	0	16	0	0	0	0	271	9	11	324	0	633
	APPROACH %	11%	0%	89%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
	PEAK HR FACTOR		0.563			0.000			0.921			0.846		0.936
	APP/DEPART	18	/	0	0	/	20	280	/	287	335	/	326	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2					

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa			
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL
AM 7:00 AM	3	0	1	0	0	0	0	22	0	0	27	0	53
7:15 AM	0	0	2	0	0	0	0	22	0	1	22	0	47
7:30 AM	0	0	5	0	0	0	0	44	1	3	24	0	77
7:45 AM	2	0	2	0	0	0	0	32	1	0	34	0	71
8:00 AM	0	0	1	0	0	0	0	34	1	3	22	0	61
8:15 AM	0	0	0	0	0	0	0	66	0	4	27	0	96
8:30 AM	0	0	3	0	0	0	0	28	0	0	53	0	84
8:45 AM	0	0	1	0	0	0	0	36	0	0	41	0	78
VOLUMES	4	0	15	0	0	0	0	283	3	11	249	0	565
APPROACH %	21%	0%	79%	0%	0%	0%	0%	99%	1%	4%	96%	0%	
APP/DEPART	19	/	0	0	/	14	286	/	298	260	/	253	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	0	5	0	0	0	0	163	1	7	142	0	318
APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%	
PEAK HR FACTOR		0.417			0.000			0.626			0.710		0.828
APP/DEPART	5	/	0	0	/	8	164	/	168	149	/	142	0
PM 04:00 PM	3	0	4	0	0	0	0	73	2	6	63	0	150
4:15 PM	0	0	2	0	0	0	0	79	0	4	64	0	148
4:30 PM	1	0	5	0	0	0	0	74	3	4	71	0	157
4:45 PM	0	0	4	0	0	0	0	73	5	2	80	0	164
5:00 PM	0	0	5	0	0	0	0	68	1	2	102	0	177
5:15 PM	0	0	4	0	0	0	0	73	3	2	70	0	152
5:30 PM	3	0	7	0	0	0	0	70	0	6	89	0	174
5:45 PM	1	0	1	0	0	0	0	67	0	1	62	0	132
VOLUMES	8	0	30	0	0	0	0	575	14	27	599	0	1,251
APPROACH %	20%	0%	80%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
APP/DEPART	37	/	0	0	/	40	588	/	604	626	/	607	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	3	0	19	0	0	0	0	283	9	12	341	0	666
APPROACH %	12%	0%	88%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
PEAK HR FACTOR		0.583			0.000			0.936			0.847		0.940
APP/DEPART	21	/	0	0	/	21	292	/	302	353	/	343	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

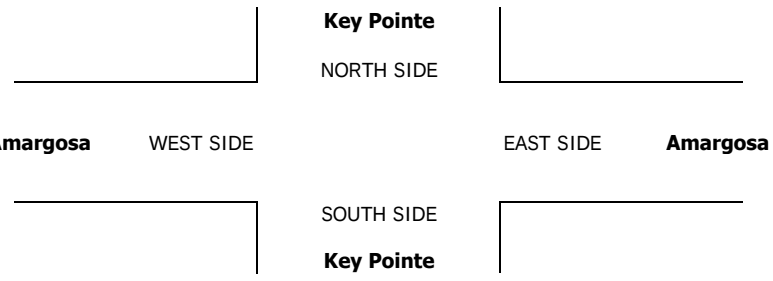
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	1	0	1	0	0	0	0	22	0	0	25	0	49	0	0	0	0	0
7:15 AM	0	0	2	0	0	0	0	19	0	1	20	0	42	0	0	0	0	0
7:30 AM	0	0	2	0	0	0	0	34	1	0	21	0	58	0	0	0	0	0
7:45 AM	0	0	2	0	0	0	0	27	1	0	29	0	59	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	32	1	3	15	0	52	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	52	0	4	23	0	79	0	0	0	0	0
8:30 AM	0	0	3	0	0	0	0	28	0	0	49	0	80	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	33	0	0	35	0	69	0	0	0	0	0
AM VOLUMES	1	0	12	0	0	0	0	247	3	8	217	0	488	0	0	0	0	0
AM APPROACH %	8%	0%	92%	0%	0%	0%	0%	99%	1%	4%	96%	0%						
AM APP/DEPART	13	/	0	0	/	11	250	/	259	225	/	218	0					
AM BEGIN PEAK HR		8:00 AM																
AM VOLUMES	0	0	5	0	0	0	0	145	1	7	122	0	280					
AM APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%						
AM PEAK HR FACTOR		0.417			0.000			0.702			0.658		0.875					
AM APP/DEPART	5	/	0	0	/	8	146	/	150	129	/	122	0					
04:00 PM	3	0	2	0	0	0	0	53	2	2	59	0	121	0	0	0	0	0
4:15 PM	0	0	2	0	0	0	0	67	0	2	56	0	127	0	0	0	0	0
4:30 PM	1	0	3	0	0	0	0	72	1	4	66	0	147	0	0	0	0	0
4:45 PM	0	0	2	0	0	0	0	70	5	2	74	0	153	0	0	0	0	0
5:00 PM	0	0	3	0	0	0	0	63	1	2	91	0	160	0	0	0	0	0
5:15 PM	0	0	1	0	0	0	0	67	3	2	62	0	135	0	0	0	0	0
5:30 PM	1	0	5	0	0	0	0	62	0	3	82	0	153	0	0	0	0	0
5:45 PM	1	0	1	0	0	0	0	67	0	1	57	0	127	0	0	0	0	0
PM VOLUMES	6	0	19	0	0	0	0	521	12	18	547	0	1,123	0	0	0	0	0
PM APPROACH %	24%	0%	76%	0%	0%	0%	0%	98%	2%	3%	97%	0%						
PM APP/DEPART	25	/	0	0	/	30	533	/	540	565	/	553	0					
PM BEGIN PEAK HR		4:45 PM																
PM VOLUMES	1	0	11	0	0	0	0	262	9	9	309	0	601					
PM APPROACH %	8%	0%	92%	0%	0%	0%	0%	97%	3%	3%	97%	0%						
PM PEAK HR FACTOR		0.500			0.000			0.903			0.855		0.939					
PM APP/DEPART	12	/	0	0	/	18	271	/	273	318	/	310	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Key Pointe)			SOUTHBOUND (Key Pointe)			EASTBOUND (Amargosa)			WESTBOUND (Amargosa)				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
	7:45 AM	1	0	0	0	0	0	0	2	0	0	2	0	5	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	3	0	0	1	0	4	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
	VOLUMES	2	0	0	0	0	0	0	8	0	0	6	0	16	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	2	/	0	0	/	0	8	/	8	6	/	8	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	4	0	0	4	0	8					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.333			0.500		0.500					
	APP/DEPART	0	/	0	0	/	0	4	/	4	4	/	4	0					
PM	04:00 PM	0	0	1	0	0	0	0	5	0	0	1	0	7	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	3	0	1	1	0	5	0	0	0	0	0
	4:30 PM	0	0	1	0	0	0	0	1	1	0	2	0	5	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0
	5:00 PM	0	0	1	0	0	0	0	1	0	0	2	0	4	0	0	0	0	0
	5:15 PM	0	0	2	0	0	0	0	2	0	0	1	0	5	0	0	0	0	0
	5:30 PM	1	0	1	0	0	0	0	1	0	2	0	0	5	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	VOLUMES	1	0	7	0	0	0	0	13	1	3	10	0	35	0	0	0	0	0
	APPROACH %	13%	0%	88%	0%	0%	0%	0%	93%	7%	23%	77%	0%						
	APP/DEPART	8	/	0	0	/	4	14	/	20	13	/	11	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	1	0	5	0	0	0	0	4	0	2	5	0	17					
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	100%	0%	29%	71%	0%						
	PEAK HR FACTOR		0.750			0.000			0.500			0.875		0.850					
	APP/DEPART	6	/	0	0	/	2	4	/	9	7	/	6	0					

Key Pointe — NORTH SIDE

Amargosa WEST SIDE — EAST SIDE **Amargosa**

SOUTH SIDE — **Key Pointe**

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

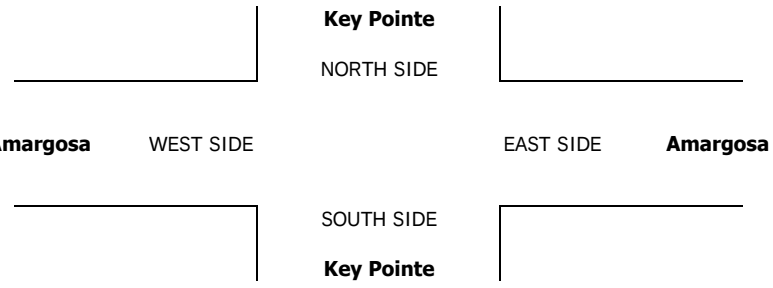
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM																		
04:00 PM	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	2	4	0	6	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	67%	0%						
APP/DEPART	0	/	0	0	/	2	0	/	0	6	/	4	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	2	0	2					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250					
APP/DEPART	0	/	0	0	/	0	0	/	0	2	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

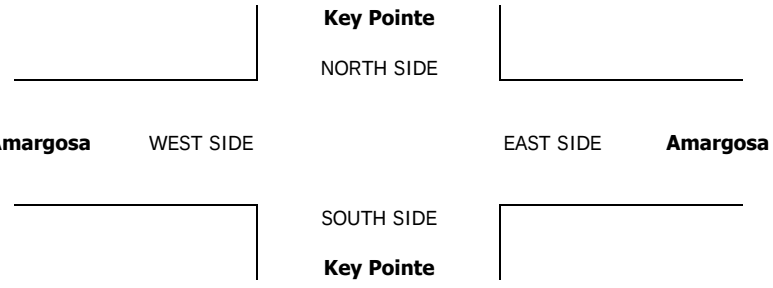
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	0	1	0	1	1	0	4	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
VOLUMES	0	0	1	0	0	0	0	6	0	1	3	0	11	0	0	0	0	0
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	25%	75%	0%						
APP/DEPART	1	/	0	0	/	1	6	/	7	4	/	3	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	4	0	0	2	0	6					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.333			0.500		0.500					
APP/DEPART	0	/	0	0	/	0	4	/	4	2	/	2	0					
PM																		
04:00 PM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	10	0	0	7	0	17	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	10	/	10	7	/	7	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	0	0	0	0	5	0	0	4	0	9					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.625			0.500		0.750					
APP/DEPART	0	/	0	0	/	0	5	/	5	4	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Key Pointe

NORTH SIDE

Amargosa WEST SIDE EAST SIDE **Amargosa**

SOUTH SIDE

Key Pointe

INTERSECTION TURNING MOVEMENT COUNTS

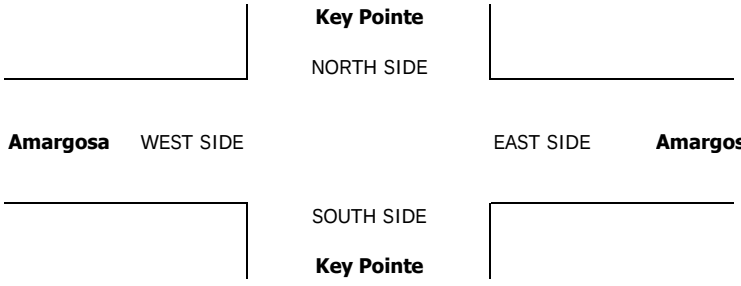
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	3	0	0	6	0	9	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	3	/	3	6	/	6	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	4	0	4					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500					
APP/DEPART	0	/	0	0	/	0	0	/	0	4	/	4	0					
PM																		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	2	0	0	4	0	6	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	2	/	2	4	/	4	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	4	0	4					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500					
APP/DEPART	0	/	0	0	/	0	0	/	0	4	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Tue, May 17, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	Key Pointe	LOCATION #:	5	
	EAST & WEST:	Main	CONTROL:	SIGNAL	

NOTES:

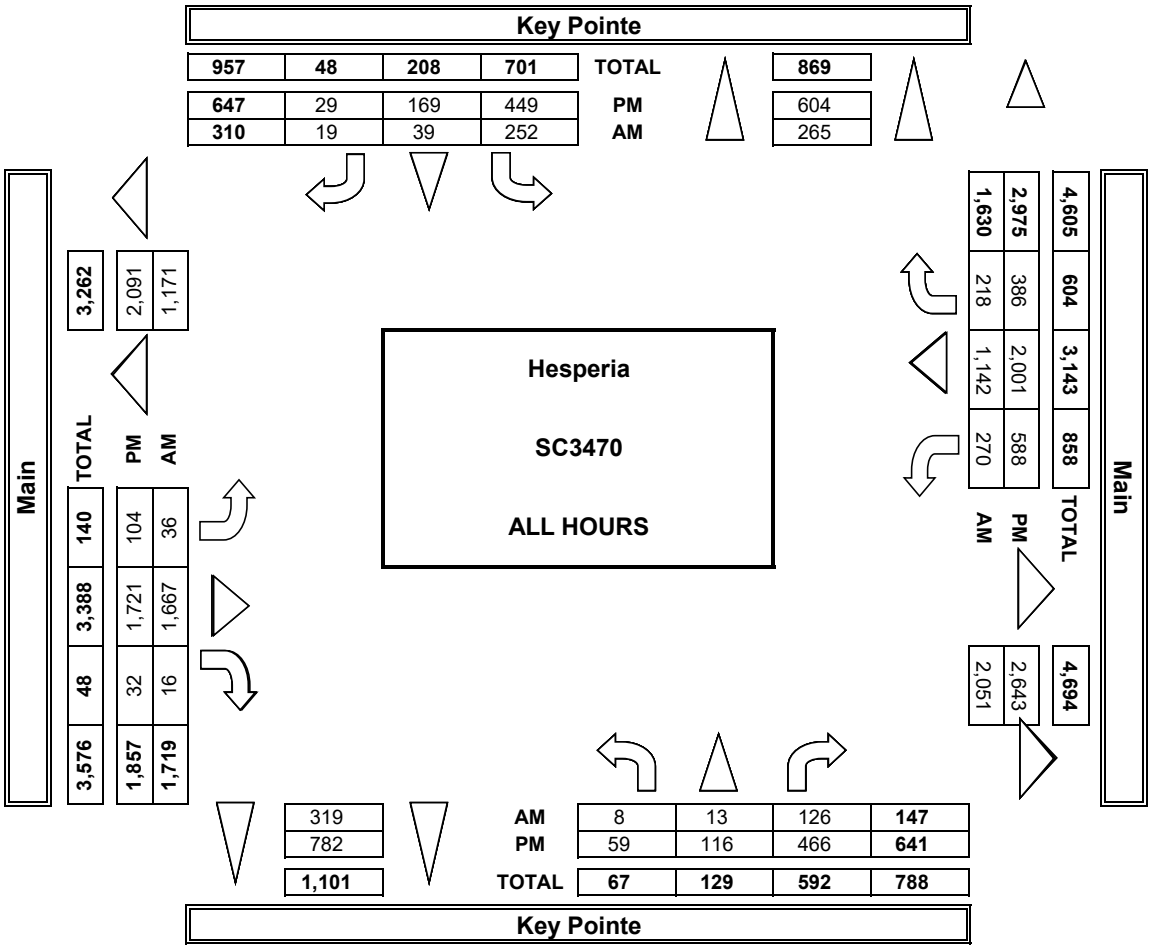
AM / PM / MD / OTHER / OTHER

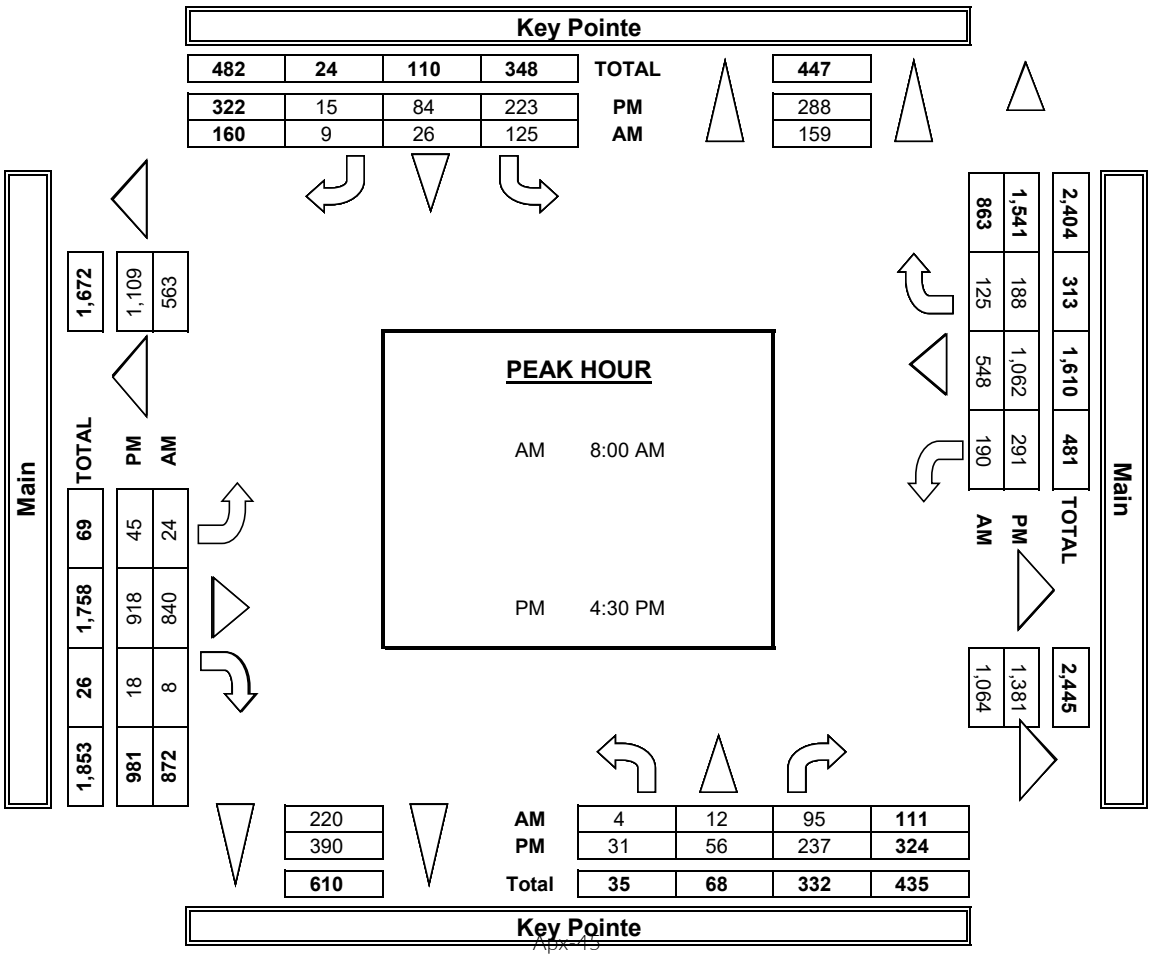
▲ N ▼ S ◄ W E ►

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL
AM	7:00 AM	1	0	12	23	2	4	4	183	1	10	115	29	384
	7:15 AM	3	0	6	27	4	3	2	221	2	19	151	20	458
	7:30 AM	0	1	4	41	4	2	3	196	0	24	171	21	467
	7:45 AM	0	0	9	36	3	1	3	227	5	27	157	23	491
	8:00 AM	1	4	17	40	4	3	6	230	2	37	114	33	491
	8:15 AM	0	2	22	32	5	2	6	207	2	41	129	30	478
	8:30 AM	2	4	28	30	8	1	6	191	3	46	155	22	496
	8:45 AM	1	2	28	23	9	3	6	212	1	66	150	40	541
	VOLUMES	8	13	126	252	39	19	36	1,667	16	270	1,142	218	3,806
	APPROACH %	5%	9%	86%	81%	13%	6%	2%	97%	1%	17%	70%	13%	
	APP/DEPART	147	/	265	310	/	319	1,719	/	2,051	1,630	/	1,171	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	4	12	95	125	26	9	24	840	8	190	548	125	2,006
	APPROACH %	4%	11%	86%	78%	16%	6%	3%	96%	1%	22%	63%	14%	
	PEAK HR FACTOR		0.816			0.851			0.916			0.843		0.927
	APP/DEPART	111	/	159	160	/	220	872	/	1,064	863	/	563	0
PM	4:00 PM	6	16	52	59	19	5	12	193	2	78	268	48	758
	4:15 PM	8	15	58	73	23	3	16	187	4	74	244	49	754
	4:30 PM	7	10	69	52	16	3	9	212	4	79	291	41	793
	4:45 PM	7	14	50	53	29	4	12	223	6	71	265	58	792
	5:00 PM	10	15	69	56	21	4	14	233	2	67	233	44	768
	5:15 PM	7	17	49	62	18	4	10	250	6	74	273	45	815
	5:30 PM	6	17	63	46	28	3	17	211	3	67	230	57	748
	5:45 PM	8	12	56	48	15	3	14	212	5	78	197	44	692
	VOLUMES	59	116	466	449	169	29	104	1,721	32	588	2,001	386	6,120
	APPROACH %	9%	18%	73%	69%	26%	4%	6%	93%	2%	20%	67%	13%	
	APP/DEPART	641	/	604	647	/	782	1,857	/	2,643	2,975	/	2,091	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	31	56	237	223	84	15	45	918	18	291	1,062	188	3,168
	APPROACH %	10%	17%	73%	69%	26%	5%	5%	94%	2%	19%	69%	12%	
	PEAK HR FACTOR		0.862			0.936			0.922			0.937		0.972
	APP/DEPART	324	/	288	322	/	390	981	/	1,381	1,541	/	1,109	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

	NORTHBOUND (Key Pointe)			SOUTHBOUND (Key Pointe)			EASTBOUND (Main)			WESTBOUND (Main)			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL
7:00 AM	1	0	12	25	2	6	4	203	1	10	127	34	425
7:15 AM	3	0	8	32	5	3	3	238	2	19	167	21	500
7:30 AM	0	1	4	44	4	2	3	208	0	26	190	24	504
7:45 AM	0	0	9	38	3	1	4	239	5	30	169	29	525
8:00 AM	1	4	19	46	4	3	7	250	2	39	128	37	538
8:15 AM	0	2	22	32	5	2	7	233	2	41	145	32	522
8:30 AM	2	4	29	33	8	1	9	213	3	46	171	24	542
8:45 AM	1	2	28	26	9	5	8	232	1	68	164	42	584
AM VOLUMES	8	13	130	276	40	23	43	1,815	16	277	1,259	240	4,139
AM APPROACH %	5%	9%	86%	81%	12%	7%	2%	97%	1%	16%	71%	14%	
AM APP/DEPART	151	/	296	339	/	333	1,874	/	2,220	1,776	/	1,290	0
AM BEGIN PEAK HR		8:00 AM											
AM VOLUMES	4	12	97	137	26	11	30	927	8	193	607	134	2,185
AM APPROACH %	4%	11%	86%	79%	15%	6%	3%	96%	1%	21%	65%	14%	
AM PEAK HR FACTOR		0.819			0.818			0.933			0.856		0.936
AM APP/DEPART	113	/	176	174	/	227	965	/	1,161	933	/	622	0
4:00 PM	6	16	52	61	19	6	12	205	2	78	284	49	789
4:15 PM	8	15	59	77	23	3	16	197	4	75	259	52	787
4:30 PM	7	10	70	54	16	3	9	226	4	80	311	41	830
4:45 PM	7	15	51	57	29	4	12	238	6	72	271	59	820
5:00 PM	10	15	72	61	21	4	15	246	2	67	242	49	803
5:15 PM	7	17	49	65	18	4	10	260	6	75	289	46	846
5:30 PM	6	17	64	49	28	5	18	228	3	68	246	64	795
5:45 PM	8	12	57	50	15	3	15	226	5	79	211	45	726
PM VOLUMES	59	117	473	473	169	32	107	1,824	32	593	2,112	404	6,393
PM APPROACH %	9%	18%	73%	70%	25%	5%	5%	93%	2%	19%	68%	13%	
PM APP/DEPART	649	/	628	674	/	794	1,963	/	2,769	3,108	/	2,203	0
PM BEGIN PEAK HR		4:30 PM											
PM VOLUMES	31	57	241	237	84	15	46	969	18	294	1,112	195	3,298
PM APPROACH %	9%	17%	73%	70%	25%	4%	4%	94%	2%	18%	69%	12%	
PM PEAK HR FACTOR		0.848			0.932			0.935			0.927		0.975
PM APP/DEPART	329	/	298	336	/	396	1,033	/	1,446	1,601	/	1,158	0

INTERSECTION TURNING MOVEMENT COUNTS

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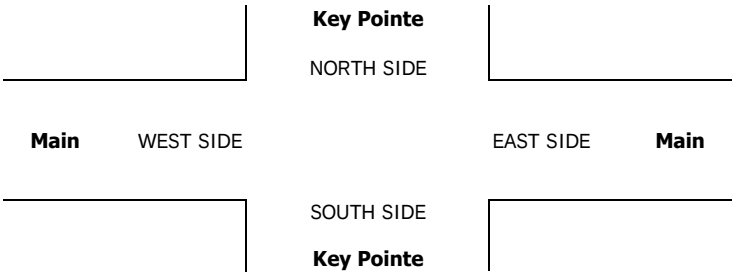
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	1	0	12	22	2	3	4	164	1	10	106	26	351	0	0	0	1	1
7:15 AM	3	0	5	23	2	3	1	202	2	19	131	19	410	0	0	0	1	1
7:30 AM	0	1	4	38	4	2	3	183	0	22	154	19	430	0	0	0	0	0
7:45 AM	0	0	9	34	3	1	2	213	5	25	143	17	452	0	0	0	0	0
8:00 AM	1	4	14	34	4	3	5	210	2	34	95	30	436	0	0	1	1	2
8:15 AM	0	2	22	32	5	2	5	183	2	41	112	28	434	0	0	0	0	0
8:30 AM	2	4	27	27	8	1	4	167	3	46	138	20	447	0	0	0	0	0
8:45 AM	1	2	28	21	9	2	5	192	1	63	132	37	493	0	0	1	3	4
AM VOLUMES	8	13	121	231	37	17	29	1,514	16	260	1,011	196	3,453	0	0	2	6	8
AM APPROACH %	6%	9%	85%	81%	13%	6%	2%	97%	1%	18%	69%	13%						
AM APP/DEPART	142	/	236	285	/	307	1,559	/	1,872	1,467	/	1,038	0					
BEGIN PEAK HR		8:00 AM																
AM VOLUMES	4	12	91	114	26	8	17	752	8	180	477	115	1,810					
AM APPROACH %	4%	11%	85%	77%	18%	5%	2%	97%	1%	23%	61%	15%						
AM PEAK HR FACTOR		0.811			0.902			0.897			0.836		0.918					
AM APP/DEPART	107	/	144	148	/	214	779	/	961	776	/	491	0					
4:00 PM	6	16	52	57	19	4	12	183	2	78	255	47	731	0	0	1	3	4
4:15 PM	8	15	56	69	23	3	16	175	4	73	227	47	716	0	0	0	0	0
4:30 PM	7	10	68	49	16	3	9	197	4	78	275	41	757	0	0	0	1	1
4:45 PM	7	13	49	51	29	4	12	208	6	69	256	56	760	0	0	0	0	0
5:00 PM	10	15	66	53	21	4	13	216	2	67	226	41	734	0	0	1	0	1
5:15 PM	7	17	49	60	18	4	10	234	6	73	258	44	780	0	0	0	2	2
5:30 PM	6	17	61	44	28	2	15	193	3	66	217	53	705	0	0	0	1	1
5:45 PM	8	12	55	47	15	3	13	200	5	77	187	43	665	0	0	0	0	0
PM VOLUMES	59	115	456	430	169	27	100	1,606	32	581	1,901	372	5,848	0	0	2	7	9
PM APPROACH %	9%	18%	72%	69%	27%	4%	6%	92%	2%	20%	67%	13%						
PM APP/DEPART	630	/	585	626	/	775	1,738	/	2,499	2,854	/	1,989	0					
BEGIN PEAK HR		4:30 PM																
PM VOLUMES	31	55	232	213	84	15	43	855	18	284	1,015	182	3,031					
PM APPROACH %	10%	17%	73%	68%	27%	5%	5%	93%	2%	19%	68%	12%						
PM PEAK HR FACTOR		0.874			0.929			0.917			0.942		0.971					
PM APP/DEPART	318	/	280	312	/	386	917	/	1,303	1,484	/	1,062	0					



INTERSECTION TURNING MOVEMENT COUNTS

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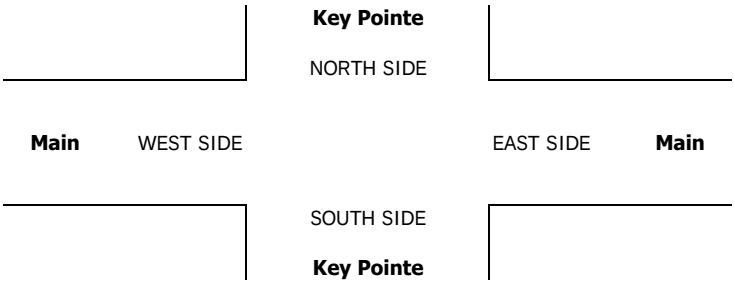
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	10	0	0	4	0	14	0	0	0	0	0
	7:15 AM	0	0	0	2	2	0	1	12	0	0	14	1	32	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	7	0	1	9	1	18	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	1	10	0	1	11	3	26	0	0	0	0	0
	8:00 AM	0	0	3	4	0	0	0	11	0	3	14	1	36	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	1	12	0	0	11	1	25	0	0	0	0	0
	8:30 AM	0	0	1	2	0	0	1	14	0	0	9	0	27	0	0	0	0	0
	8:45 AM	0	0	0	1	0	0	0	11	0	3	13	3	31	0	0	0	0	0
	VOLUMES	0	0	4	9	2	0	4	87	0	8	85	10	209	0	0	0	0	0
	APPROACH %	0%	0%	100%	82%	18%	0%	4%	96%	0%	8%	83%	10%						
	APP/DEPART	4	/	14	11	/	10	91	/	100	103	/	85	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	4	7	0	0	2	48	0	6	47	5	119					
	APPROACH %	0%	0%	100%	100%	0%	0%	4%	96%	0%	10%	81%	9%						
	PEAK HR FACTOR		0.333			0.438			0.833			0.763		0.826					
	APP/DEPART	4	/	7	7	/	6	50	/	59	58	/	47	0					
PM	4:00 PM	0	0	0	1	0	0	0	2	0	0	5	1	9	0	0	0	0	0
	4:15 PM	0	0	2	2	0	0	0	9	0	1	10	1	25	0	0	0	0	0
	4:30 PM	0	0	1	2	0	0	0	9	0	1	6	0	19	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	9	0	2	7	2	21	0	0	0	0	0
	5:00 PM	0	0	2	1	0	0	0	13	0	0	2	0	18	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	14	0	0	9	0	23	0	0	0	0	0
	5:30 PM	0	0	2	1	0	0	2	10	0	1	6	0	22	0	0	0	0	0
	5:45 PM	0	0	1	0	0	0	0	6	0	0	2	0	9	0	0	0	0	0
	VOLUMES	0	0	9	7	0	0	2	72	0	5	47	4	146	0	0	0	0	0
	APPROACH %	0%	0%	100%	100%	0%	0%	3%	97%	0%	9%	84%	7%						
	APP/DEPART	9	/	6	7	/	5	74	/	88	56	/	47	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	4	3	0	0	0	45	0	3	24	2	81					
	APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	10%	83%	7%						
	PEAK HR FACTOR		0.500			0.375			0.804			0.659		0.880					
	APP/DEPART	4	/	2	3	/	3	45	/	52	29	/	24	0					



INTERSECTION TURNING MOVEMENT COUNTS

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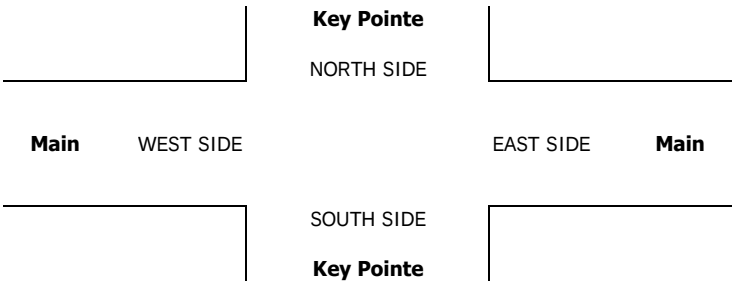
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
7:30 AM	0	0	0	1	0	0	0	2	0	1	2	0	6	0	0	0	0	0
7:45 AM	0	0	0	1	0	0	0	1	0	0	0	2	4	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	2	0	0	4	0	6	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
VOLUMES	0	0	0	2	0	0	0	16	0	1	14	2	35	0	0	0	0	0
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	6%	82%	12%						
APP/DEPART	0	/	2	2	/	1	16	/	18	17	/	14	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	9	0	0	10	0	19					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.750			0.625		0.792					
APP/DEPART	0	/	0	0	/	0	9	/	9	10	/	10	0					
PM																		
4:00 PM	0	0	0	1	0	1	0	3	0	0	1	0	6	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
5:15 PM	0	0	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	1	1	4	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	1	0	1	1	1	5	0	0	0	0	0
VOLUMES	0	0	0	2	0	1	1	11	0	1	11	2	29	0	0	0	0	0
APPROACH %	0%	0%	0%	67%	0%	33%	8%	92%	0%	7%	79%	14%						
APP/DEPART	0	/	3	3	/	1	12	/	13	14	/	12	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	0	0	0	1	0	0	0	4	0	0	6	0	11					
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.250			0.500			0.750		0.917					
APP/DEPART	0	/	0	1	/	0	4	/	5	6	/	6	0					



INTERSECTION TURNING MOVEMENT COUNTS

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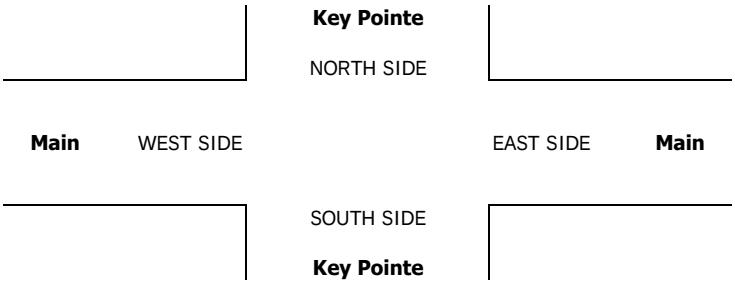
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Key Pointe)			SOUTHBOUND (Key Pointe)			EASTBOUND (Main)			WESTBOUND (Main)				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	1	0	1	0	6	0	0	5	2	15	0	0	0	0	0
	7:15 AM	0	0	1	2	0	0	0	4	0	0	3	0	10	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	2	0	0	6	1	9	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	3	0	1	3	1	8	0	0	0	0	0
	8:00 AM	0	0	0	2	0	0	0	5	0	0	2	1	10	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	8	0	0	4	0	12	0	0	0	0	0
	8:30 AM	0	0	0	1	0	0	1	5	0	0	3	0	10	0	0	0	0	0
	8:45 AM	0	0	0	1	0	1	1	5	0	0	2	0	10	0	0	0	0	0
	VOLUMES	0	0	1	7	0	2	2	38	0	1	28	5	84	0	0	0	0	0
	APPROACH %	0%	0%	100%	78%	0%	22%	5%	95%	0%	3%	82%	15%						
	APP/DEPART	1	/	7	9	/	1	40	/	46	34	/	30	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	4	0	1	2	23	0	0	11	1	42					
	APPROACH %	0%	0%	0%	80%	0%	20%	8%	92%	0%	0%	92%	8%						
	PEAK HR FACTOR		0.000			0.625			0.781			0.750		0.875					
	APP/DEPART	0	/	3	5	/	0	25	/	27	12	/	12	0					
PM	4:00 PM	0	0	0	0	0	0	0	3	0	0	5	0	8	0	0	0	0	0
	4:15 PM	0	0	0	1	0	0	0	2	0	0	3	1	7	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	3	0	0	7	0	10	0	0	0	0	0
	4:45 PM	0	0	0	2	0	0	0	4	0	0	0	0	6	0	0	0	0	0
	5:00 PM	0	0	1	2	0	0	0	2	0	0	3	2	10	0	0	0	0	0
	5:15 PM	0	0	0	1	0	0	0	1	0	0	5	0	7	0	0	0	0	0
	5:30 PM	0	0	0	1	0	1	0	4	0	0	6	3	15	0	0	0	0	0
	5:45 PM	0	0	0	1	0	0	0	5	0	0	5	0	11	0	0	0	0	0
	VOLUMES	0	0	1	8	0	1	0	24	0	0	34	6	74	0	0	0	0	0
	APPROACH %	0%	0%	100%	89%	0%	11%	0%	100%	0%	0%	85%	15%						
	APP/DEPART	1	/	6	9	/	0	24	/	33	40	/	35	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	1	5	0	0	0	10	0	0	15	2	33					
	APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	0%	88%	12%						
	PEAK HR FACTOR		0.250			0.625			0.625			0.607		0.825					
	APP/DEPART	1	/	2	5	/	0	10	/	16	17	/	15	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

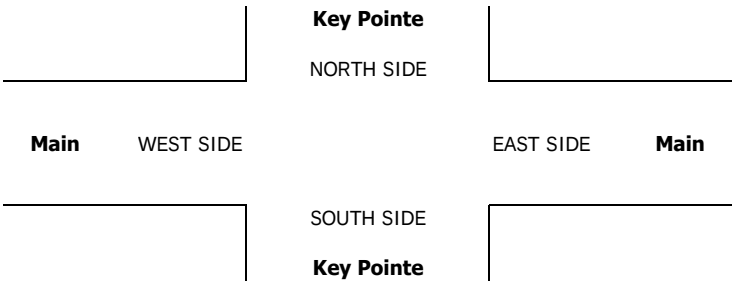
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.750					
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	1	1	0	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%						
	APP/DEPART	0	/	0	0	/	1	2	/	2	2	/	1	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	0	0	0	0	2	0	1	0	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.375					
	APP/DEPART	0	/	0	0	/	1	2	/	2	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

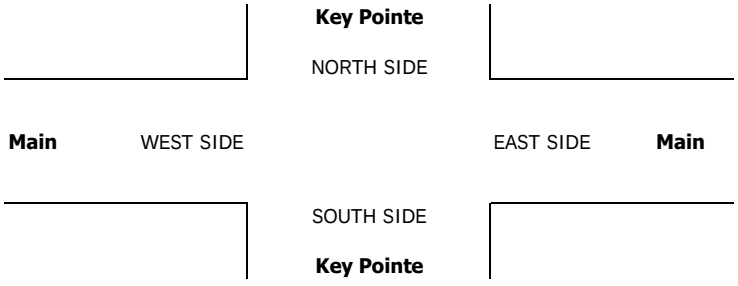
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:30 AM	0	0	0	2	0	0	0	2	0	0	0	0	4	0	0	0	0	0
7:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	1	1	0	0	0	1	3	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	1	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	2	0	0	1	2	5	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
VOLUMES	0	0	0	3	0	0	1	10	0	0	3	5	22	0	0	0	0	0
APPROACH %	0%	0%	0%	100%	0%	0%	9%	91%	0%	0%	38%	63%						
APP/DEPART	0	/	6	3	/	0	11	/	13	8	/	3	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	1	6	0	0	2	4	13					
APPROACH %	0%	0%	0%	0%	0%	0%	14%	86%	0%	0%	33%	67%						
PEAK HR FACTOR		0.000			0.000			0.875			0.500		0.650					
APP/DEPART	0	/	5	0	/	0	7	/	6	6	/	2	0					
PM																		
4:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	0	0	2	0	3	0	0	0	0	0
4:30 PM	0	0	0	1	0	0	0	1	0	0	2	0	4	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
VOLUMES	0	1	0	2	0	0	1	6	0	0	7	2	19	0	0	0	0	0
APPROACH %	0%	100%	0%	100%	0%	0%	14%	86%	0%	0%	78%	22%						
APP/DEPART	1	/	4	2	/	0	7	/	8	9	/	7	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	0	1	0	1	0	0	1	2	0	0	2	2	9					
APPROACH %	0%	100%	0%	100%	0%	0%	33%	67%	0%	0%	50%	50%						
PEAK HR FACTOR		0.250			0.250			0.750			0.500		0.563					
APP/DEPART	1	/	4	1	/	0	3	/	3	4	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
Tue, May 17, 22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
	EAST & WEST:	Main	CONTROL:	SIGNAL

NOTES:

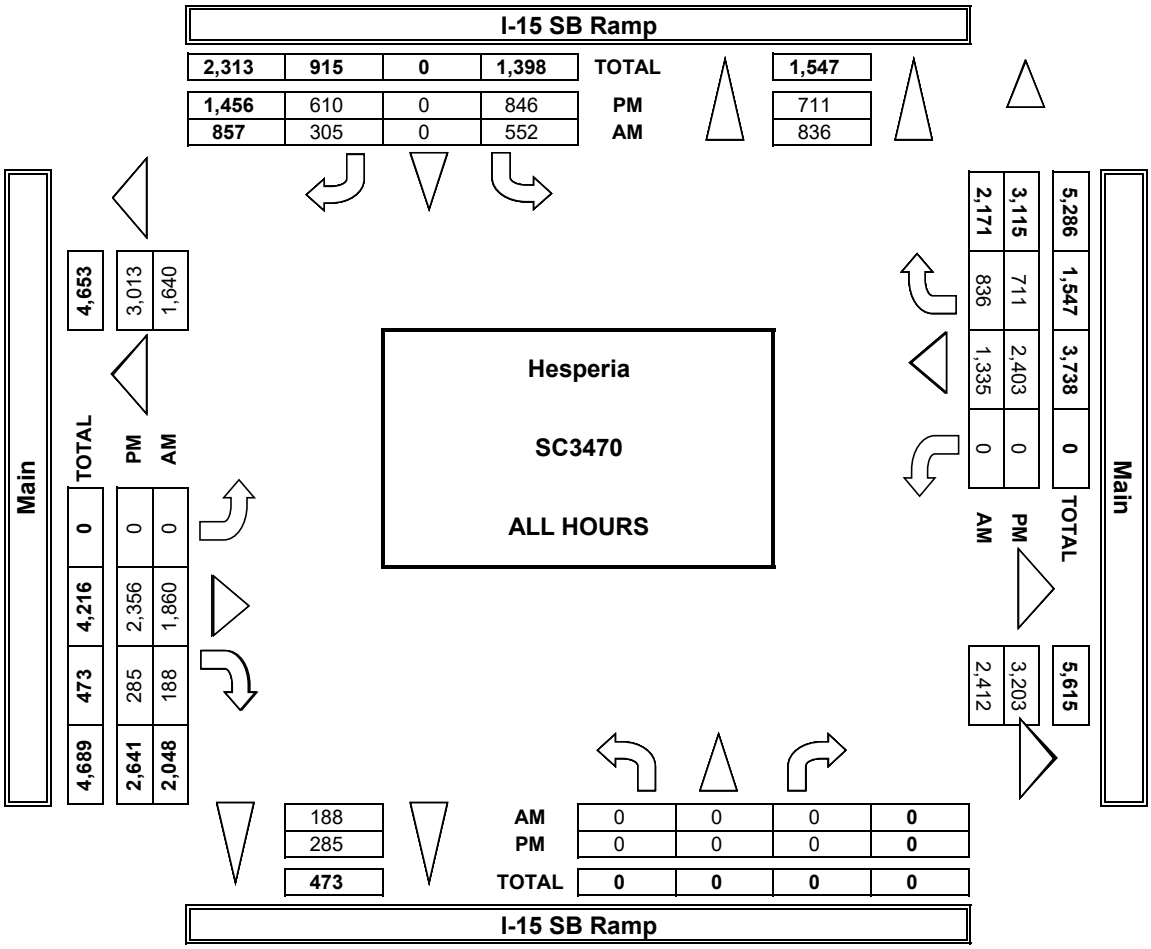
AM / PM / MD / OTHER / OTHER

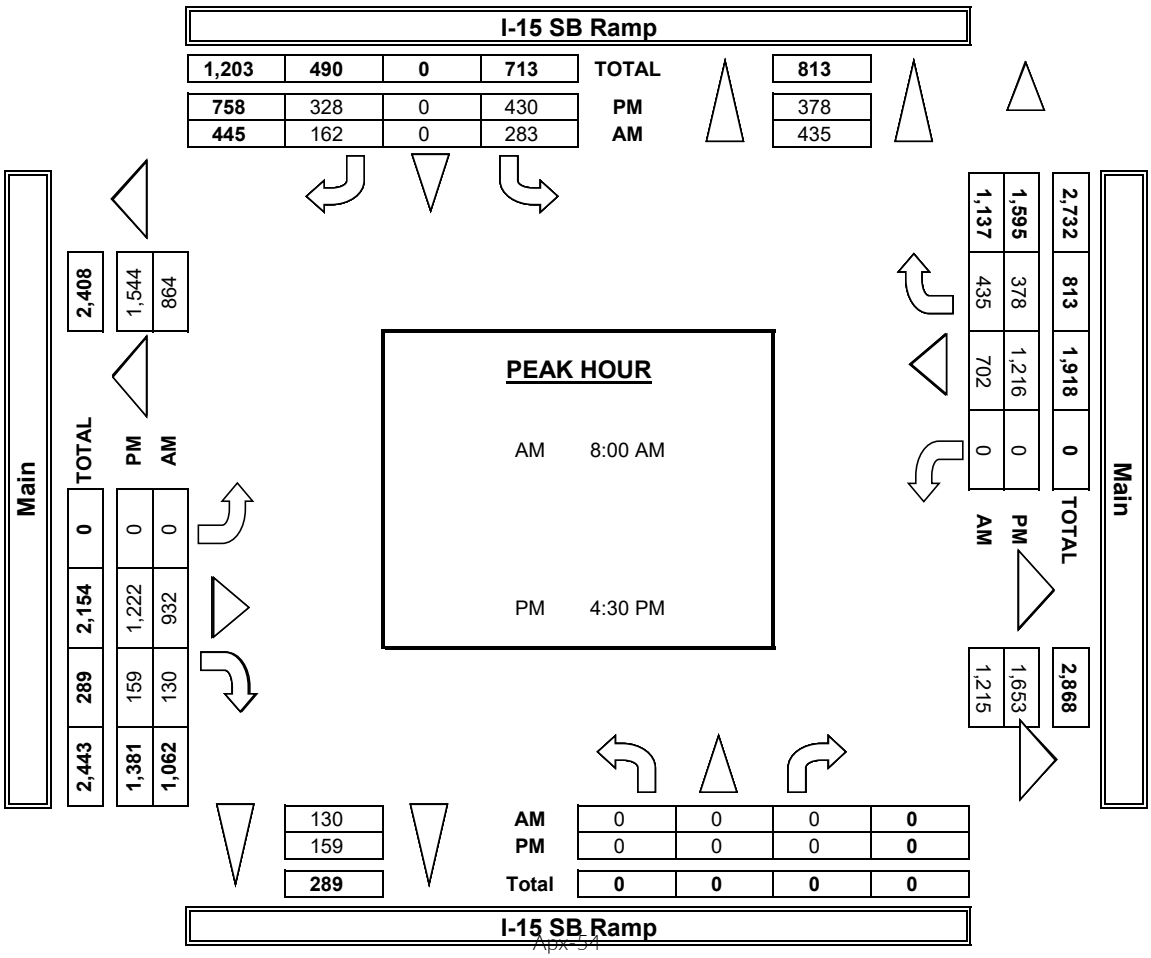
▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	59	0	26	0	200	19	0	117	102	523
	7:15 AM	0	0	0	62	0	31	0	238	0	0	155	107	593
	7:30 AM	0	0	0	66	0	36	0	233	16	0	183	105	639
	7:45 AM	0	0	0	82	0	50	0	257	23	0	178	87	677
	8:00 AM	0	0	0	59	0	27	0	241	39	0	144	103	613
	8:15 AM	0	0	0	77	0	46	0	236	30	0	165	118	672
	8:30 AM	0	0	0	66	0	49	0	223	29	0	184	108	659
	8:45 AM	0	0	0	81	0	40	0	232	32	0	209	106	700
	VOLUMES	0	0	0	552	0	305	0	1,860	188	0	1,335	836	5,076
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	91%	9%	0%	61%	39%	
	APP/DEPART	0	/	836	857	/	188	2,048	/	2,412	2,171	/	1,640	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	283	0	162	0	932	130	0	702	435	2,644
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	88%	12%	0%	62%	38%	
	PEAK HR FACTOR		0.000			0.904			0.948			0.902		0.944
	APP/DEPART	0	/	435	445	/	130	1,062	/	1,215	1,137	/	864	0
PM	4:00 PM	0	0	0	127	0	67	0	286	21	0	321	93	915
	4:15 PM	0	0	0	101	0	71	0	292	31	0	324	78	897
	4:30 PM	0	0	0	95	0	80	0	302	45	0	323	96	941
	4:45 PM	0	0	0	123	0	88	0	277	32	0	302	93	915
	5:00 PM	0	0	0	102	0	82	0	319	46	0	277	99	925
	5:15 PM	0	0	0	110	0	78	0	324	36	0	314	90	952
	5:30 PM	0	0	0	99	0	83	0	277	41	0	280	92	872
	5:45 PM	0	0	0	89	0	61	0	279	33	0	262	70	794
	VOLUMES	0	0	0	846	0	610	0	2,356	285	0	2,403	711	7,212
	APPROACH %	0%	0%	0%	58%	0%	42%	0%	89%	11%	0%	77%	23%	
	APP/DEPART	0	/	711	1,456	/	285	2,641	/	3,203	3,115	/	3,013	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	430	0	328	0	1,222	159	0	1,216	378	3,734
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	88%	12%	0%	76%	24%	
	PEAK HR FACTOR		0.000			0.898			0.946			0.952		0.981
	APP/DEPART	0	/	378	758	/	159	1,381	/	1,653	1,595	/	1,544	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	60	0	28	0	222	23	0	130	114	575
	7:15 AM	0	0	0	65	0	40	0	256	0	0	169	125	655
	7:30 AM	0	0	0	69	0	47	0	247	19	0	194	121	697
	7:45 AM	0	0	0	89	0	55	0	271	24	0	191	103	732
	8:00 AM	0	0	0	66	0	29	0	261	47	0	160	113	675
	8:15 AM	0	0	0	83	0	49	0	257	35	0	176	138	737
	8:30 AM	0	0	0	71	0	54	0	243	34	0	199	126	727
	8:45 AM	0	0	0	91	0	46	0	249	38	0	223	134	779
	VOLUMES	0	0	0	593	0	347	0	2,005	219	0	1,441	972	5,575
	APPROACH %	0%	0%	0%	63%	0%	37%	0%	90%	10%	0%	60%	40%	
	APP/DEPART	0	/	972	939	/	219	2,223	/	2,597	2,413	/	1,787	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	310	0	177	0	1,010	153	0	758	511	2,917
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	87%	13%	0%	60%	40%	
	PEAK HR FACTOR		0.000			0.894			0.947			0.889		0.936
	APP/DEPART	0	/	511	487	/	153	1,163	/	1,320	1,268	/	934	0
PM	4:00 PM	0	0	0	132	0	78	0	298	25	0	328	106	964
	4:15 PM	0	0	0	112	0	72	0	302	34	0	341	85	946
	4:30 PM	0	0	0	100	0	85	0	313	49	0	340	108	994
	4:45 PM	0	0	0	127	0	91	0	292	37	0	309	105	960
	5:00 PM	0	0	0	104	0	91	0	329	53	0	280	107	962
	5:15 PM	0	0	0	113	0	84	0	339	39	0	327	99	1,000
	5:30 PM	0	0	0	102	0	98	0	292	45	0	290	95	921
	5:45 PM	0	0	0	94	0	64	0	295	36	0	274	74	837
	VOLUMES	0	0	0	882	0	661	0	2,458	316	0	2,487	778	7,581
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	76%	24%	
	APP/DEPART	0	/	778	1,543	/	316	2,774	/	3,340	3,265	/	3,148	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	443	0	350	0	1,273	177	0	1,255	418	3,915
	APPROACH %	0%	0%	0%	56%	0%	44%	0%	88%	12%	0%	75%	25%	
	PEAK HR FACTOR		0.000			0.911			0.950			0.934		0.979
	APP/DEPART	0	/	418	793	/	177	1,449	/	1,716	1,673	/	1,605	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

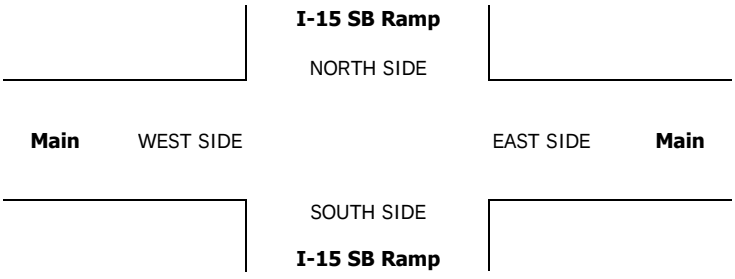
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	58	0	25	0	181	15	0	104	89	472	0	0	0	0	0
	7:15 AM	0	0	0	59	0	25	0	219	0	0	137	90	530	0	0	0	0	0
	7:30 AM	0	0	0	60	0	29	0	219	14	0	173	90	585	0	0	0	0	0
	7:45 AM	0	0	0	72	0	43	0	240	22	0	161	74	612	0	0	0	0	0
	8:00 AM	0	0	0	50	0	24	0	218	33	0	124	89	538	0	0	0	0	0
	8:15 AM	0	0	0	72	0	44	0	216	26	0	151	100	609	0	0	0	0	0
	8:30 AM	0	0	0	58	0	44	0	200	25	0	168	90	585	0	0	0	0	0
	8:45 AM	0	0	0	72	0	33	0	214	27	0	189	84	619	0	0	0	0	0
	VOLUMES	0	0	0	501	0	267	0	1,707	162	0	1,207	706	4,550	0	0	0	0	0
	APPROACH %	0%	0%	0%	65%	0%	35%	0%	91%	9%	0%	63%	37%						
	APP/DEPART	0	/	706	768	/	162	1,869	/	2,208	1,913	/	1,474	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	252	0	145	0	848	111	0	632	363	2,351					
	APPROACH %	0%	0%	0%	63%	0%	37%	0%	88%	12%	0%	64%	36%						
	PEAK HR FACTOR		0.000			0.856			0.955			0.911		0.950					
	APP/DEPART	0	/	363	397	/	111	959	/	1,100	995	/	777	0					
PM	4:00 PM	0	0	0	122	0	60	0	276	16	0	314	81	869	0	0	0	0	0
	4:15 PM	0	0	0	91	0	69	0	280	28	0	305	73	846	0	0	0	0	0
	4:30 PM	0	0	0	91	0	77	0	289	41	0	306	84	888	0	0	0	0	0
	4:45 PM	0	0	0	120	0	86	0	260	29	0	294	84	873	0	0	0	1	1
	5:00 PM	0	0	0	99	0	77	0	307	40	0	273	91	887	0	0	0	0	0
	5:15 PM	0	0	0	108	0	73	0	305	32	0	299	78	895	0	0	0	0	0
	5:30 PM	0	0	0	95	0	75	0	261	37	0	268	87	823	0	0	0	0	0
	5:45 PM	0	0	0	85	0	59	0	266	30	0	253	66	759	0	0	0	0	0
	VOLUMES	0	0	0	811	0	576	0	2,244	253	0	2,312	644	6,841	0	0	0	1	1
	APPROACH %	0%	0%	0%	58%	0%	42%	0%	90%	10%	0%	78%	22%						
	APP/DEPART	0	/	644	1,387	/	253	2,497	/	3,056	2,957	/	2,888	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	418	0	313	0	1,161	142	0	1,172	337	3,544					
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	78%	22%						
	PEAK HR FACTOR		0.000			0.887			0.939			0.968		0.990					
	APP/DEPART	0	/	337	731	/	142	1,303	/	1,580	1,510	/	1,485	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	1	0	0	0	9	3	0	7	9	29	0	0	0	0	0
	7:15 AM	0	0	0	2	0	2	0	11	0	0	14	10	39	0	0	0	0	0
	7:30 AM	0	0	0	6	0	2	0	6	0	0	4	9	27	0	0	0	0	0
	7:45 AM	0	0	0	8	0	6	0	12	0	0	13	7	46	0	0	0	0	0
	8:00 AM	0	0	0	4	0	3	0	15	3	0	12	12	49	0	0	0	0	0
	8:15 AM	0	0	0	2	0	1	0	10	2	0	10	11	36	0	0	0	0	0
	8:30 AM	0	0	0	7	0	2	0	14	2	0	8	12	45	0	0	0	0	0
	8:45 AM	0	0	0	5	0	5	0	10	3	0	17	10	50	0	0	0	0	0
	VOLUMES	0	0	0	35	0	21	0	87	13	0	85	80	321	0	0	0	0	0
	APPROACH %	0%	0%	0%	63%	0%	38%	0%	87%	13%	0%	52%	48%						
	APP/DEPART	0	/	80	56	/	13	100	/	122	165	/	106	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	18	0	11	0	49	10	0	47	45	180					
	APPROACH %	0%	0%	0%	62%	0%	38%	0%	83%	17%	0%	51%	49%						
	PEAK HR FACTOR		0.000			0.725			0.819			0.852		0.900					
	APP/DEPART	0	/	45	29	/	10	59	/	67	92	/	58	0					
PM	4:00 PM	0	0	0	3	0	1	0	3	3	0	3	7	20	0	0	0	0	0
	4:15 PM	0	0	0	4	0	2	0	9	2	0	12	2	31	0	0	0	0	0
	4:30 PM	0	0	0	2	0	1	0	8	2	0	8	7	28	0	0	0	0	0
	4:45 PM	0	0	0	1	0	0	0	12	1	0	5	4	23	0	0	0	0	0
	5:00 PM	0	0	0	3	0	1	0	8	3	0	3	5	23	0	0	0	0	0
	5:15 PM	0	0	0	0	0	2	0	15	3	0	11	10	41	0	0	0	0	0
	5:30 PM	0	0	0	3	0	1	0	9	2	0	8	4	27	0	0	0	0	0
	5:45 PM	0	0	0	1	0	0	0	6	2	0	2	2	13	0	0	0	0	0
	VOLUMES	0	0	0	17	0	8	0	70	18	0	52	41	206	0	0	0	0	0
	APPROACH %	0%	0%	0%	68%	0%	32%	0%	80%	20%	0%	56%	44%						
	APP/DEPART	0	/	41	25	/	18	88	/	87	93	/	60	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	6	0	4	0	43	9	0	27	26	115					
	APPROACH %	0%	0%	0%	60%	0%	40%	0%	83%	17%	0%	51%	49%						
	PEAK HR FACTOR		0.000			0.625			0.722			0.631		0.701					
	APP/DEPART	0	/	26	10	/	9	52	/	49	53	/	31	0					

I-15 SB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 SB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

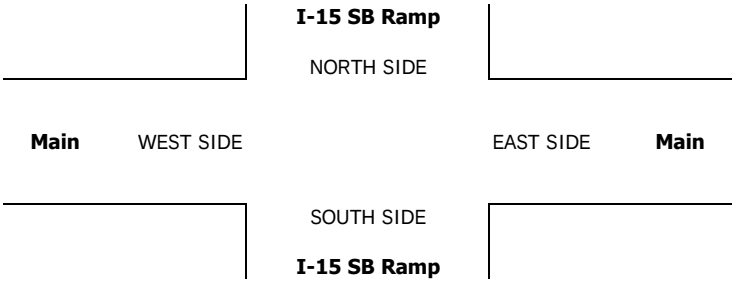
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	2	1	5	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	3	0	0	0	1	4	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	1	0	3	1	6	0	0	0	0	0
	7:45 AM	0	0	0	1	0	0	0	1	1	0	2	0	5	0	0	0	0	0
	8:00 AM	0	0	0	2	0	0	0	3	0	0	3	0	8	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
	8:30 AM	0	0	0	0	0	2	0	2	0	0	2	0	6	0	0	0	0	0
	8:45 AM	0	0	0	1	0	1	0	2	0	0	0	1	5	0	0	0	0	0
	VOLUMES	0	0	0	4	0	3	0	16	2	0	14	4	43	0	0	0	0	0
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	78%	22%						
	APP/DEPART	0	/	4	7	/	2	18	/	20	18	/	17	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	3	0	3	0	9	0	0	7	1	23					
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	100%	0%	0%	88%	13%						
	PEAK HR FACTOR		0.000			0.750			0.750			0.667		0.719					
	APP/DEPART	0	/	1	6	/	0	9	/	12	8	/	10	0					
PM	4:00 PM	0	0	0	1	0	2	0	2	2	0	1	1	9	0	0	0	0	0
	4:15 PM	0	0	0	2	0	0	0	0	0	0	1	0	3	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	1	0	3	2	6	0	0	0	0	0
	4:45 PM	0	0	0	0	0	1	0	1	0	0	2	0	4	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	1	0	0	1	3	0	0	0	0	0
	5:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	1	0	0	0	2	1	0	2	1	7	0	0	0	0	0
	5:45 PM	0	0	0	2	0	0	0	1	0	0	2	1	6	0	0	0	0	0
	VOLUMES	0	0	0	7	0	3	0	8	5	0	11	6	40	0	0	0	0	0
	APPROACH %	0%	0%	0%	70%	0%	30%	0%	62%	38%	0%	65%	35%						
	APP/DEPART	0	/	6	10	/	5	13	/	15	17	/	14	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	1	0	1	0	3	2	0	5	3	15					
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	60%	40%	0%	63%	38%						
	PEAK HR FACTOR		0.000			0.500			0.625			0.400		0.625					
	APP/DEPART	0	/	3	2	/	2	5	/	4	8	/	6	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

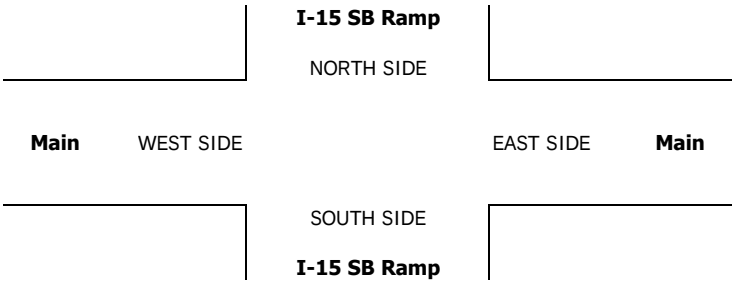
CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	1	0	7	1	0	3	3	15	0	0	0	0	0
	7:15 AM	0	0	0	1	0	4	0	4	0	0	3	6	18	0	0	0	0	0
	7:30 AM	0	0	0	0	0	5	0	3	1	0	3	5	17	0	0	0	0	0
	7:45 AM	0	0	0	1	0	1	0	3	0	0	2	6	13	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	4	3	0	2	2	11	0	0	0	0	0
	8:15 AM	0	0	0	2	0	1	0	6	2	0	2	7	20	0	0	0	0	0
	8:30 AM	0	0	0	0	0	1	0	4	2	0	3	6	16	0	0	0	0	0
	8:45 AM	0	0	0	3	0	1	0	4	2	0	2	11	23	0	0	0	0	0
	VOLUMES	0	0	0	7	0	14	0	35	11	0	20	46	133	0	0	0	0	0
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	76%	24%	0%	30%	70%						
	APP/DEPART	0	/	46	21	/	11	46	/	42	66	/	34	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	5	0	3	0	18	9	0	9	26	70					
	APPROACH %	0%	0%	0%	63%	0%	38%	0%	67%	33%	0%	26%	74%						
	PEAK HR FACTOR		0.000			0.500			0.844			0.673		0.761					
	APP/DEPART	0	/	26	8	/	9	27	/	23	35	/	12	0					
PM	4:00 PM	0	0	0	1	0	4	0	3	0	0	1	4	13	0	0	0	0	0
	4:15 PM	0	0	0	3	0	0	0	2	1	0	4	3	13	0	0	0	0	0
	4:30 PM	0	0	0	2	0	2	0	2	1	0	4	3	14	0	0	0	0	0
	4:45 PM	0	0	0	1	0	1	0	4	2	0	1	5	14	0	0	0	0	0
	5:00 PM	0	0	0	0	0	4	0	2	2	0	0	2	10	0	0	0	0	0
	5:15 PM	0	0	0	1	0	2	0	3	0	0	3	2	11	0	0	0	0	0
	5:30 PM	0	0	0	0	0	7	0	3	1	0	2	0	13	0	0	0	0	0
	5:45 PM	0	0	0	1	0	1	0	6	1	0	4	1	14	0	0	0	0	0
	VOLUMES	0	0	0	9	0	21	0	25	8	0	19	20	102	0	0	0	0	0
	APPROACH %	0%	0%	0%	30%	0%	70%	0%	76%	24%	0%	49%	51%						
	APP/DEPART	0	/	20	30	/	8	33	/	34	39	/	40	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	4	0	9	0	11	5	0	8	12	49					
	APPROACH %	0%	0%	0%	31%	0%	69%	0%	69%	31%	0%	40%	60%						
	PEAK HR FACTOR		0.000			0.813			0.667			0.714		0.875					
	APP/DEPART	0	/	12	13	/	5	16	/	15	20	/	17	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.750					
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	1	0	2	0	1	1	0	0	0	5	0	0	0	0	0
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	50%	50%	0%	0%	0%						
	APP/DEPART	0	/	0	3	/	1	2	/	2	0	/	2	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	0	0	1	0	1	1	0	0	0	3					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.500			0.000		0.375					
	APP/DEPART	0	/	0	1	/	1	2	/	1	0	/	1	0					

I-15 SB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 SB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

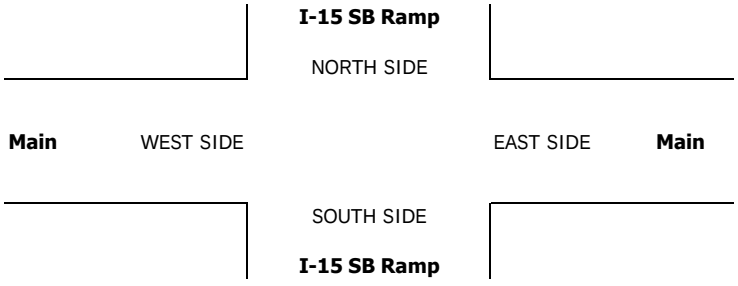
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:00 AM	0	0	0	3	0	0	0	1	0	0	2	0	6	0	0	0	0	0
	8:15 AM	0	0	0	1	0	0	0	2	0	0	0	0	3	0	0	0	0	0
	8:30 AM	0	0	0	1	0	0	0	2	0	0	3	0	6	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	VOLUMES	0	0	0	5	0	0	0	13	0	0	8	0	26	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	5	/	0	13	/	18	8	/	8	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	5	0	0	0	6	0	0	6	0	17					
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.417			0.750			0.500		0.708					
	APP/DEPART	0	/	0	5	/	0	6	/	11	6	/	6	0					
PM	4:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0	0
	4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	VOLUMES	0	0	0	1	0	0	0	8	0	0	9	0	18	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	1	/	0	8	/	9	9	/	9	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	1	0	0	0	3	0	0	4	0	8					
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.250			0.250			0.500		0.400					
	APP/DEPART	0	/	0	1	/	0	3	/	4	4	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Tue, May 17, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3	
	EAST & WEST:	Main	CONTROL:	SIGNAL	

NOTES:

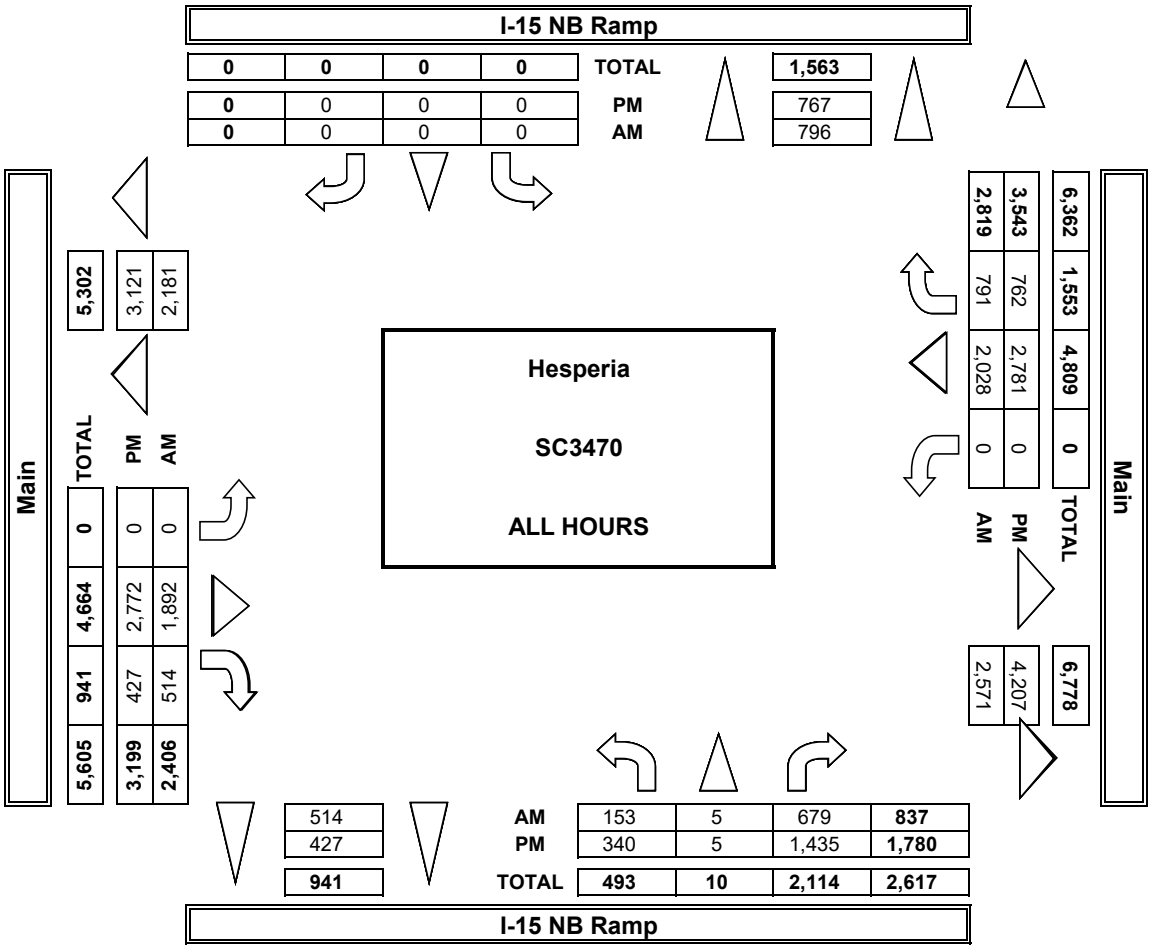
AM / PM / MD / OTHER / OTHER

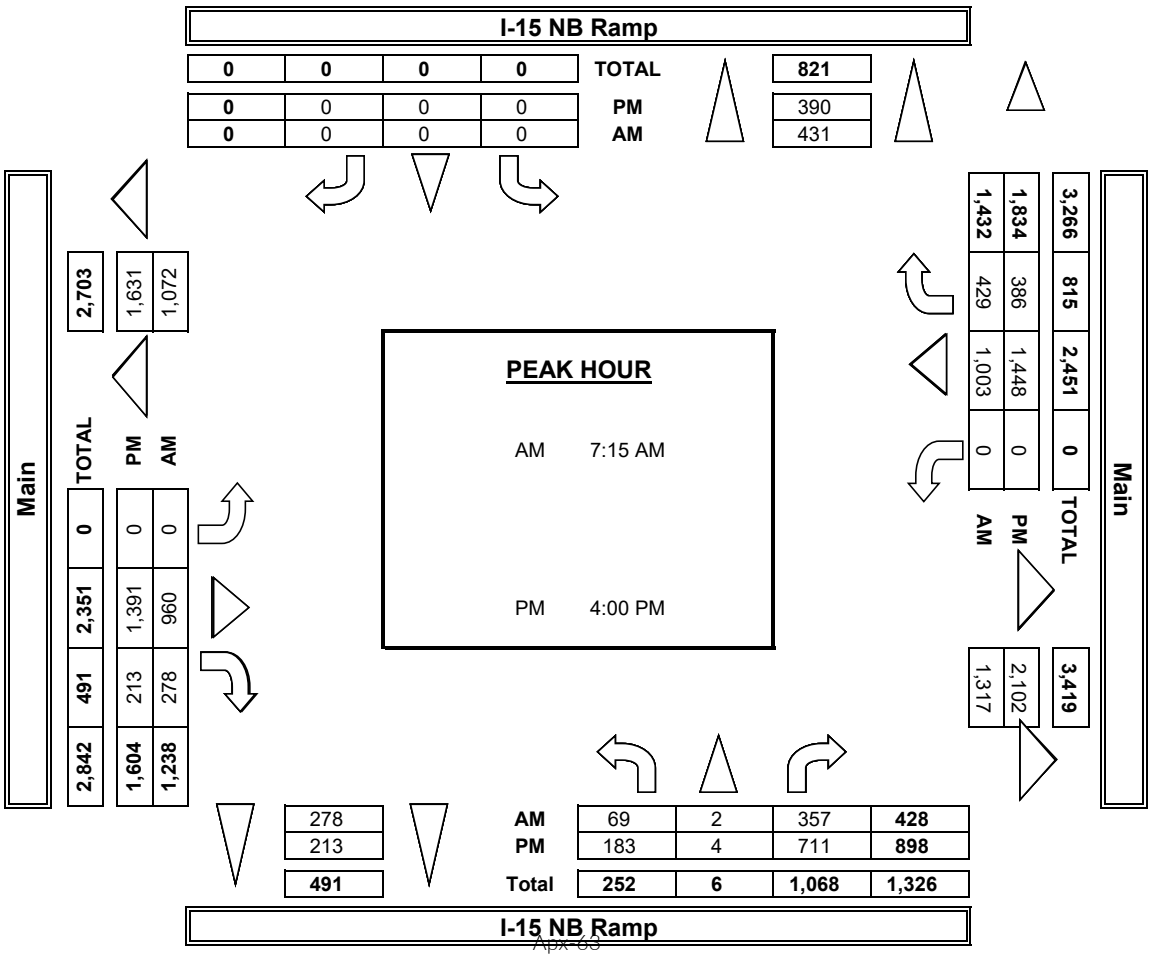
▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	24	0	91	0	0	0	0	210	49	0	195	92	661
	7:15 AM	17	1	97	0	0	0	0	221	79	0	245	118	778
	7:30 AM	11	0	103	0	0	0	0	229	70	0	277	112	802
	7:45 AM	20	1	85	0	0	0	0	273	66	0	245	117	807
	8:00 AM	21	0	72	0	0	0	0	237	63	0	236	82	711
	8:15 AM	18	0	79	0	0	0	0	250	57	0	265	79	748
	8:30 AM	18	1	81	0	0	0	0	217	72	0	274	90	753
	8:45 AM	24	2	71	0	0	0	0	255	58	0	291	101	802
	VOLUMES	153	5	679	0	0	0	0	1,892	514	0	2,028	791	6,062
	APPROACH %	18%	1%	81%	0%	0%	0%	0%	79%	21%	0%	72%	28%	
	APP/DEPART	837	/	796	0	/	514	2,406	/	2,571	2,819	/	2,181	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	69	2	357	0	0	0	0	960	278	0	1,003	429	3,098
	APPROACH %	16%	0%	83%	0%	0%	0%	0%	78%	22%	0%	70%	30%	
	PEAK HR FACTOR		0.930			0.000			0.913			0.920		0.960
	APP/DEPART	428	/	431	0	/	278	1,238	/	1,317	1,432	/	1,072	0
PM	4:00 PM	49	1	182	0	0	0	0	363	50	0	365	104	1,114
	4:15 PM	48	2	183	0	0	0	0	338	55	0	354	99	1,079
	4:30 PM	45	1	180	0	0	0	0	341	56	0	374	96	1,093
	4:45 PM	41	0	166	0	0	0	0	349	52	0	355	87	1,050
	5:00 PM	36	0	163	0	0	0	0	355	66	0	340	98	1,058
	5:15 PM	32	0	169	0	0	0	0	376	58	0	372	100	1,107
	5:30 PM	51	0	200	0	0	0	0	320	52	0	327	97	1,047
	5:45 PM	38	1	192	0	0	0	0	330	38	0	294	81	974
	VOLUMES	340	5	1,435	0	0	0	0	2,772	427	0	2,781	762	8,522
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	87%	13%	0%	78%	22%	
	APP/DEPART	1,780	/	767	0	/	427	3,199	/	4,207	3,543	/	3,121	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	183	4	711	0	0	0	0	1,391	213	0	1,448	386	4,336
	APPROACH %	20%	0%	79%	0%	0%	0%	0%	87%	13%	0%	79%	21%	
	PEAK HR FACTOR		0.964			0.000			0.971			0.976		0.973
	APP/DEPART	898	/	390	0	/	213	1,604	/	2,102	1,834	/	1,631	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	27	0	106	0	0	0	0	223	59	0	216	99	729
	7:15 AM	21	1	111	0	0	0	0	236	85	0	274	130	856
	7:30 AM	13	0	120	0	0	0	0	241	75	0	302	119	869
	7:45 AM	27	2	96	0	0	0	0	287	73	0	266	127	877
	8:00 AM	21	0	85	0	0	0	0	257	70	0	262	85	779
	8:15 AM	20	0	95	0	0	0	0	267	67	0	294	88	831
	8:30 AM	20	2	98	0	0	0	0	231	83	0	305	97	835
	8:45 AM	25	2	78	0	0	0	0	277	63	0	332	110	885
	VOLUMES	173	6	787	0	0	0	0	2,018	573	0	2,250	854	6,660
	APPROACH %	18%	1%	82%	0%	0%	0%	0%	78%	22%	0%	72%	28%	
	APP/DEPART	965	/	860	0	/	573	2,591	/	2,805	3,104	/	2,423	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	82	3	411	0	0	0	0	1,021	303	0	1,103	460	3,381
	APPROACH %	16%	1%	83%	0%	0%	0%	0%	77%	23%	0%	71%	29%	
	PEAK HR FACTOR		0.930			0.000			0.919			0.930		0.964
	APP/DEPART	495	/	463	0	/	303	1,323	/	1,431	1,563	/	1,185	0
PM	4:00 PM	49	1	205	0	0	0	0	378	51	0	384	111	1,179
	4:15 PM	52	2	198	0	0	0	0	354	60	0	375	102	1,141
	4:30 PM	46	1	192	0	0	0	0	355	59	0	402	98	1,151
	4:45 PM	44	0	178	0	0	0	0	362	58	0	371	93	1,105
	5:00 PM	37	0	175	0	0	0	0	363	70	0	350	104	1,097
	5:15 PM	35	0	195	0	0	0	0	393	59	0	391	103	1,175
	5:30 PM	54	0	224	0	0	0	0	334	56	0	337	102	1,106
	5:45 PM	43	1	201	0	0	0	0	346	43	0	305	83	1,021
	VOLUMES	359	5	1,567	0	0	0	0	2,883	454	0	2,913	795	8,974
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	86%	14%	0%	79%	21%	
	APP/DEPART	1,930	/	800	0	/	454	3,337	/	4,450	3,708	/	3,272	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	190	4	773	0	0	0	0	1,449	227	0	1,531	404	4,576
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	86%	14%	0%	79%	21%	
	PEAK HR FACTOR		0.948			0.000			0.976			0.969		0.970
	APP/DEPART	967	/	408	0	/	227	1,675	/	2,221	1,935	/	1,721	0

INTERSECTION TURNING MOVEMENT COUNTS

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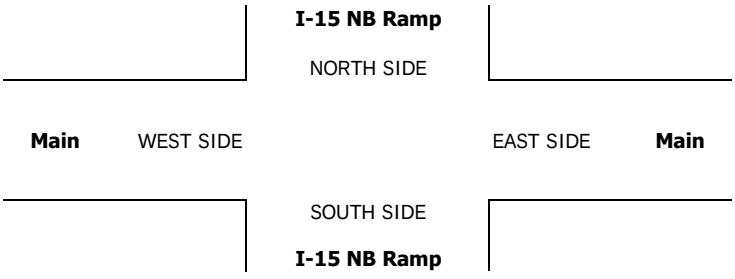
DATE:					
5/17/22	LOCATION:	Hesperia	PROJECT #:	SC3470	
TUESDAY	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3	
	EAST & WEST:	Main	CONTROL:	SIGNAL	

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	18	0	72	0	0	0	0	197	42	0	175	86	590	0	0	0	0	0
	7:15 AM	13	1	78	0	0	0	0	207	71	0	214	103	687	0	0	0	0	0
	7:30 AM	8	0	86	0	0	0	0	215	64	0	255	106	734	0	0	0	0	0
	7:45 AM	12	0	70	0	0	0	0	253	59	0	223	106	723	0	0	0	0	0
	8:00 AM	21	0	59	0	0	0	0	211	57	0	202	79	629	0	0	0	0	0
	8:15 AM	15	0	62	0	0	0	0	232	50	0	236	70	665	0	0	0	0	0
	8:30 AM	17	0	65	0	0	0	0	200	58	0	241	83	664	0	0	0	0	0
	8:45 AM	23	2	61	0	0	0	0	233	53	0	250	90	712	0	0	0	0	0
	VOLUMES	127	3	553	0	0	0	0	1,748	454	0	1,796	723	5,404	0	0	0	0	0
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	79%	21%	0%	71%	29%						
	APP/DEPART	683	/	726	0	/	454	2,202	/	2,301	2,519	/	1,923	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	54	1	293	0	0	0	0	886	251	0	894	394	2,773					
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	78%	22%	0%	69%	31%						
	PEAK HR FACTOR		0.926			0.000			0.911			0.892		0.944					
	APP/DEPART	348	/	395	0	/	251	1,137	/	1,179	1,288	/	948	0					
PM	4:00 PM	49	1	162	0	0	0	0	350	48	0	346	96	1,052	0	0	0	0	0
	4:15 PM	44	2	169	0	0	0	0	321	50	0	334	95	1,015	0	0	0	0	0
	4:30 PM	44	1	166	0	0	0	0	327	53	0	346	93	1,030	0	0	0	0	0
	4:45 PM	39	0	144	0	0	0	0	334	47	0	340	81	985	0	0	0	0	0
	5:00 PM	35	0	150	0	0	0	0	344	62	0	329	93	1,013	0	0	0	0	0
	5:15 PM	29	0	148	0	0	0	0	356	57	0	348	96	1,034	0	0	0	0	0
	5:30 PM	48	0	176	0	0	0	0	304	48	0	313	93	982	0	0	0	0	0
	5:45 PM	34	1	177	0	0	0	0	316	35	0	285	78	926	0	0	0	0	0
	VOLUMES	322	5	1,292	0	0	0	0	2,652	400	0	2,641	725	8,037	0	0	0	0	0
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	87%	13%	0%	78%	22%						
	APP/DEPART	1,619	/	730	0	/	400	3,052	/	3,944	3,366	/	2,963	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	176	4	641	0	0	0	0	1,332	198	0	1,366	365	4,082					
	APPROACH %	21%	0%	78%	0%	0%	0%	0%	87%	13%	0%	79%	21%						
	PEAK HR FACTOR		0.955			0.000			0.961			0.979		0.970					
	APP/DEPART	821	/	369	0	/	198	1,530	/	1,973	1,731	/	1,542	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

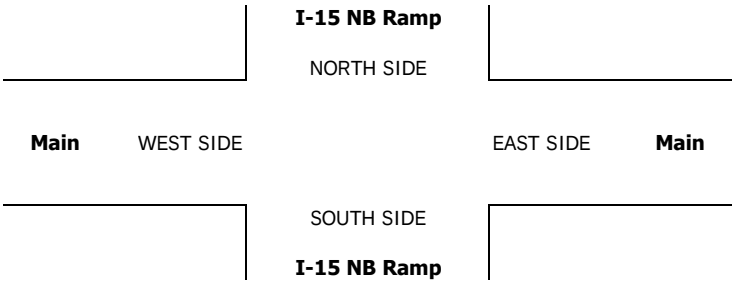
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	6	0	15	0	0	0	0	7	3	0	10	2	43	0	0	0	0	0
	7:15 AM	3	0	15	0	0	0	0	7	6	0	21	12	64	0	0	0	0	0
	7:30 AM	2	0	10	0	0	0	0	8	4	0	11	3	38	0	0	0	0	0
	7:45 AM	6	1	13	0	0	0	0	16	4	0	14	7	61	0	0	0	0	0
	8:00 AM	0	0	9	0	0	0	0	16	3	0	24	2	54	0	0	0	0	0
	8:15 AM	3	0	12	0	0	0	0	10	2	0	18	6	51	0	0	0	0	0
	8:30 AM	0	1	10	0	0	0	0	10	11	0	20	4	56	0	0	0	0	0
	8:45 AM	1	0	9	0	0	0	0	12	3	0	26	7	58	0	0	0	0	0
	VOLUMES	21	2	93	0	0	0	0	86	36	0	144	43	425	0	0	0	0	0
	APPROACH %	18%	2%	80%	0%	0%	0%	0%	70%	30%	0%	77%	23%						
	APP/DEPART	116	/	45	0	/	36	122	/	179	187	/	165	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	11	1	47	0	0	0	0	47	17	0	70	24	217					
	APPROACH %	19%	2%	80%	0%	0%	0%	0%	73%	27%	0%	74%	26%						
	PEAK HR FACTOR		0.738			0.000			0.800			0.712		0.848					
	APP/DEPART	59	/	25	0	/	17	64	/	94	94	/	81	0					
PM	4:00 PM	0	0	10	0	0	0	0	4	2	0	10	6	32	0	0	0	0	0
	4:15 PM	3	0	7	0	0	0	0	10	3	0	11	2	36	0	0	0	0	0
	4:30 PM	0	0	10	0	0	0	0	9	1	0	15	3	38	0	0	0	0	0
	4:45 PM	1	0	20	0	0	0	0	10	3	0	8	4	46	0	0	0	0	0
	5:00 PM	1	0	9	0	0	0	0	9	2	0	7	2	30	0	0	0	0	0
	5:15 PM	2	0	10	0	0	0	0	14	1	0	19	3	49	0	0	0	0	0
	5:30 PM	2	0	15	0	0	0	0	9	3	0	10	2	41	0	0	0	0	0
	5:45 PM	2	0	14	0	0	0	0	7	0	0	2	3	28	0	0	0	0	0
	VOLUMES	11	0	95	0	0	0	0	72	15	0	82	25	300	0	0	0	0	0
	APPROACH %	10%	0%	90%	0%	0%	0%	0%	83%	17%	0%	77%	23%						
	APP/DEPART	106	/	25	0	/	15	87	/	167	107	/	93	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	4	0	47	0	0	0	0	33	9	0	44	15	152					
	APPROACH %	8%	0%	92%	0%	0%	0%	0%	79%	21%	0%	75%	25%						
	PEAK HR FACTOR		0.607			0.000			0.808			0.819		0.826					
	APP/DEPART	51	/	15	0	/	9	42	/	80	59	/	48	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	1	0	0	0	0	2	0	0	3	2	8	0	0	0	0	0
	7:15 AM	0	0	2	0	0	0	0	2	1	0	1	0	6	0	0	0	0	0
	7:30 AM	1	0	2	0	0	0	0	0	1	0	3	1	8	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	1	0	2	1	5	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	4	1	0	3	0	8	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	1	1	0	2	0	4	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	2	0	0	2	1	5	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	2	1	0	1	0	4	0	0	0	0	0
	VOLUMES	1	0	5	0	0	0	0	14	6	0	17	5	48	0	0	0	0	0
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	70%	30%	0%	77%	23%						
	APP/DEPART	6	/	5	0	/	6	20	/	19	22	/	18	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	1	0	4	0	0	0	0	7	4	0	9	2	27					
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	64%	36%	0%	82%	18%						
	PEAK HR FACTOR		0.417			0.000			0.550			0.688		0.844					
	APP/DEPART	5	/	2	0	/	4	11	/	11	11	/	10	0					
PM	4:00 PM	0	0	2	0	0	0	0	3	0	0	2	0	7	0	0	0	0	0
	4:15 PM	0	0	3	0	0	0	0	2	0	0	1	0	6	0	0	0	0	0
	4:30 PM	0	0	1	0	0	0	0	0	0	0	5	0	6	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	1	0	0	2	0	4	0	0	0	0	0
	5:00 PM	0	0	1	0	0	0	0	1	0	0	1	0	3	0	0	0	0	0
	5:15 PM	0	0	1	0	0	0	0	2	0	0	0	1	4	0	0	0	0	0
	5:30 PM	0	0	2	0	0	0	0	3	0	0	3	0	8	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	2	1	0	3	0	6	0	0	0	0	0
	VOLUMES	0	0	11	0	0	0	0	14	1	0	17	1	44	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	93%	7%	0%	94%	6%						
	APP/DEPART	11	/	1	0	/	1	15	/	25	18	/	17	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	7	0	0	0	0	6	0	0	10	0	23					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.583			0.000			0.500			0.500		0.821					
	APP/DEPART	7	/	0	0	/	0	6	/	13	10	/	10	0					

I-15 NB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 NB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	3	0	0	0	0	3	4	0	6	2	18	0	0	0	0	0
	7:15 AM	1	0	2	0	0	0	0	4	1	0	8	3	19	0	0	0	0	0
	7:30 AM	0	0	5	0	0	0	0	2	1	0	8	2	18	0	0	0	0	0
	7:45 AM	2	0	2	0	0	0	0	2	2	0	6	2	16	0	0	0	0	0
	8:00 AM	0	0	4	0	0	0	0	2	2	0	4	1	13	0	0	0	0	0
	8:15 AM	0	0	5	0	0	0	0	4	4	0	9	3	25	0	0	0	0	0
	8:30 AM	1	0	6	0	0	0	0	2	2	0	8	2	21	0	0	0	0	0
	8:45 AM	0	0	1	0	0	0	0	6	1	0	13	1	22	0	0	0	0	0
	VOLUMES	4	0	28	0	0	0	0	25	17	0	62	16	152	0	0	0	0	0
	APPROACH %	13%	0%	88%	0%	0%	0%	0%	60%	40%	0%	79%	21%						
	APP/DEPART	32	/	16	0	/	17	42	/	53	78	/	66	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	3	0	13	0	0	0	0	10	6	0	26	8	66					
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	63%	38%	0%	76%	24%						
	PEAK HR FACTOR		0.800			0.000			0.800			0.773		0.868					
	APP/DEPART	16	/	8	0	/	6	16	/	23	34	/	29	0					
PM	4:00 PM	0	0	8	0	0	0	0	4	0	0	5	2	19	0	0	0	0	0
	4:15 PM	1	0	4	0	0	0	0	4	1	0	6	0	16	0	0	0	0	0
	4:30 PM	0	0	3	0	0	0	0	4	0	0	7	0	14	0	0	0	0	0
	4:45 PM	1	0	0	0	0	0	0	3	2	0	5	2	13	0	0	0	0	0
	5:00 PM	0	0	3	0	0	0	0	1	1	0	2	2	9	0	0	0	0	0
	5:15 PM	1	0	10	0	0	0	0	4	0	0	4	0	19	0	0	0	0	0
	5:30 PM	1	0	7	0	0	0	0	2	1	0	1	2	14	0	0	0	0	0
	5:45 PM	2	0	1	0	0	0	0	5	2	0	3	0	13	0	0	0	0	0
	VOLUMES	6	0	36	0	0	0	0	27	7	0	33	8	117	0	0	0	0	0
	APPROACH %	14%	0%	86%	0%	0%	0%	0%	79%	21%	0%	80%	20%						
	APP/DEPART	42	/	8	0	/	7	34	/	63	41	/	39	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	2	0	15	0	0	0	0	15	3	0	23	4	62					
	APPROACH %	12%	0%	88%	0%	0%	0%	0%	83%	17%	0%	85%	15%						
	PEAK HR FACTOR		0.531			0.000			0.900			0.964		0.816					
	APP/DEPART	17	/	4	0	/	3	18	/	30	27	/	25	0					

I-15 NB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 NB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

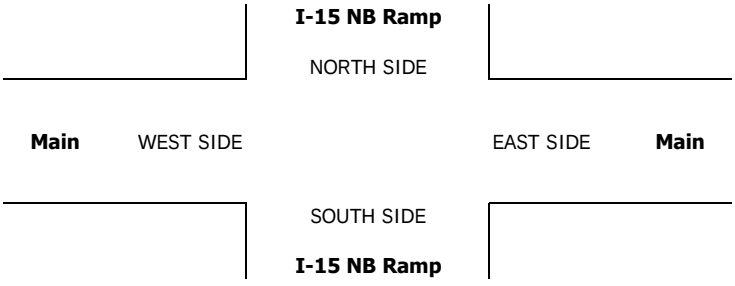
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	1	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	50%	50%						
	APP/DEPART	0	/	1	0	/	0	2	/	2	2	/	1	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	1	2					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500					
	APP/DEPART	0	/	1	0	/	0	0	/	0	2	/	1	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	1	0	0	1	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	100%						
	APP/DEPART	0	/	1	0	/	1	2	/	1	1	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	1	2					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.250		0.250					
	APP/DEPART	0	/	1	0	/	0	1	/	1	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	4	0	0	2	0	6	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	2	1	0	3	0	6	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	3	5	0	0	0	0	0
AM VOLUMES	0	0	0	0	0	0	0	17	1	0	8	3	29	0	0	0	0	0
AM APPROACH %	0%	0%	0%	0%	0%	0%	0%	94%	6%	0%	73%	27%						
AM APP/DEPART	0	/	3	0	/	1	18	/	17	11	/	8	0					
BEGIN PEAK HR		7:15 AM																
AM VOLUMES	0	0	0	0	0	0	0	10	0	0	3	0	13					
AM APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.625			0.375		0.542					
AM APP/DEPART	0	/	0	0	/	0	10	/	10	3	/	3	0					
4:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	1	0	2	1	4	0	0	0	0	0
4:30 PM	1	0	0	0	0	0	0	1	2	0	1	0	5	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
PM VOLUMES	1	0	1	0	0	0	0	6	3	0	8	2	21	0	0	0	0	0
PM APPROACH %	50%	0%	50%	0%	0%	0%	0%	67%	33%	0%	80%	20%						
PM APP/DEPART	2	/	2	0	/	3	9	/	7	10	/	9	0					
BEGIN PEAK HR		4:00 PM																
PM VOLUMES	1	0	1	0	0	0	0	4	3	0	5	1	15					
PM APPROACH %	50%	0%	50%	0%	0%	0%	0%	57%	43%	0%	83%	17%						
PEAK HR FACTOR		0.500			0.000			0.583			0.500		0.750					
PM APP/DEPART	2	/	1	0	/	3	7	/	5	6	/	6	0					

I-15 NB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 NB Ramp

APPENDIX D

TRIP GENERATION COMPARISON ANALYSIS

November 28, 2022

Mr. Ramin Namvar
RACHAMIN 5, LLC
6001 East Slauson Avenue
Commerce, California 90040

RE: Amargosa and Palmeto High-Cube Warehouse Trip Generation Comparison Analysis
Project No.: 19522

Dear Mr. Namvar:

Ganddini Group, Inc. is pleased to provide this Trip Generation Comparison Analysis for the proposed Amargosa and Palmeto High-Cube Warehouse Project. The purpose of this trip generation comparison analysis is to evaluate the change in trip generation that can be expected between the proposed project and an alternative land use consisting of commercial retail. This Trip Generation Comparison Analysis supplements the Amargosa and *Palmetto High-Cube Warehouse Traffic Impact Analysis* (Ganddini Group, Inc., August 18, 2022). We trust the findings of this analysis will aid you and the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The project site is currently undeveloped. Figure 1 illustrates the project location map.

The 30.52-acre project site is proposed to include a 499,850 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 499,700 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE *Trip Generation Manual* and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD).

As shown in Table 1, the proposed project is forecast to generate approximately 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

ALTERNATIVE LAND USE TRIP GENERATION

Table 2 shows the alternative land use (commercial retail) trip generation based on regression equations from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 820 (Shopping Center (>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use.

It should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 2 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative land use trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021) since Amargosa Road adjacent to the project site is a low volume roadway and pass-by trips would be minimal.

As shown in Table 2, the alternative land use is forecast to generate a total of approximately 18,915 daily trips, including 429 trips during the AM peak hour and 1,798 trips during the PM peak hour without a pass-by trips reduction.

TRIP GENERATION COMPARISON

Table 3 shows the difference in project trip generation between the proposed project and the alternative land use. As shown in Table 3, the proposed project is forecast to generate approximately 17,832 fewer daily trips compared to a shopping center land use of equivalent size, including 339 fewer trips during the AM peak hour and 1,717 fewer trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION

Figure 3 to Figure 6 show the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns were developed using engineering judgment in consultation with City of Hesperia staff and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

ALTERNATIVE LAND USE TRIP DISTRIBUTION

Figure 7 shows the forecast directional distribution patterns for the alternative land use generated trips. The alternative land use trip distribution patterns were developed using engineering judgment and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

PROJECT TRIP ASSIGNMENT

Project AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 8 and Figure 9, respectively.

ALTERNATIVE LAND USE TRIP ASSIGNMENT

Alternative Land Use AM and PM peak hour intersection turning movement volumes expected from the alternative land use are depicted on Figure 10 and Figure 11, respectively.

Mr. Ramin Namvar
RACHAMIN 5, LLC
November 28, 2022

Difference in Trip Assignment

The additional AM and PM peak hour intersection turning movement volumes expected from the alternative land use versus the proposed project are depicted on Figure 12 and Figure 13, respectively.

As shown on these figures, the alternative land use as commercial retail is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed project for all turning movements at each study area intersection where peak hour trips are expected to be added.

Conclusion

Based on the trip generation comparison analysis, the proposed project consisting of a 499,850 square foot high-cube fulfillment center warehouse building is forecast to generate substantially fewer trips (up to 94% fewer daily trips) compared to an alternative land use composed of 499,850 square feet of commercial retail.

The alternative land use as commercial retail is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed project for all turning movements at each study area intersection where peak hour trips are expected to be added.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
Bryan Crawford | Senior Associate
Giancarlo Ganddini, PE, PTP | Principal



Table 1
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.850 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet
(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
(3) PCE = Passenger Car Equivalent
(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 2
Alternative Land Use Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Units[2]	% In	% Out	Equation	% In	% Out	Equation	Daily Equation
Shopping Center (>150k)	ITE 820	TSF	62%	38%	T=0.59(X) + 133.55	48%	52%	LN(T) = 0.72Ln(X) + 3.02	T = 26.11(X) + 5863.73

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units[3]	In	Out	Total	In	Out	Total	Daily
Shopping Center (>150k)	499.850	TSF	266	163	429	863	935	1,798	18,915

Notes:

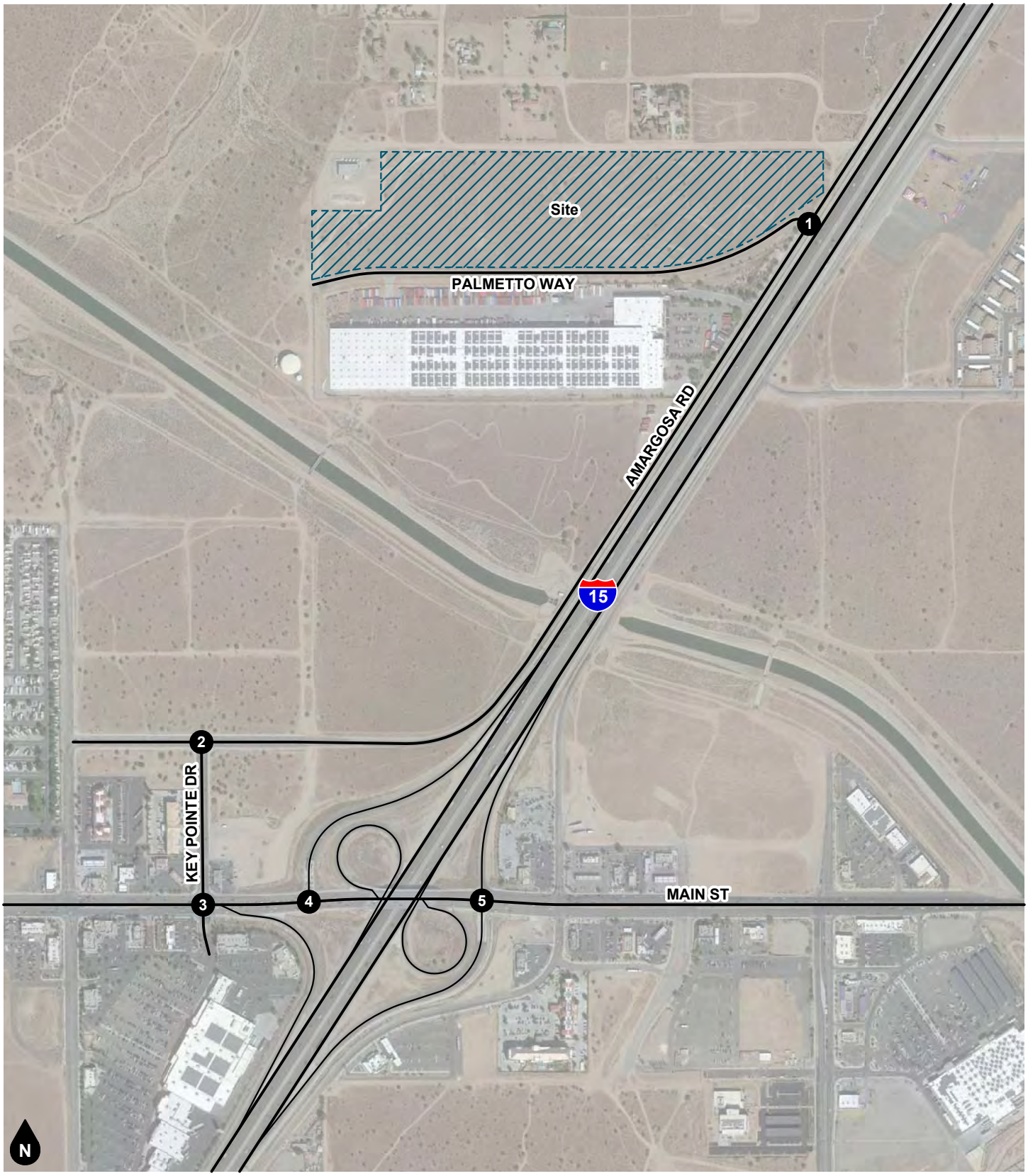
(1) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.

(2) TSF = Thousand Square Feet

Table 3
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	Daily
Project[1]	65	25	90	32	49	81	1,083
Alternative Land Use[2]	266	163	429	863	935	1,798	18,915
Difference	**-201**	**-138**	**-339**	**-831**	**-886**	**-1,717**	**-17,832**
	-76%	**-85%**	**-79%**	**-96%**	**-95%**	**-95%**	**-94%**

Notes:
(1) See Table 1.
(2) See Table 2.



Legend

Study Intersection

Figure 1
Project Location Map

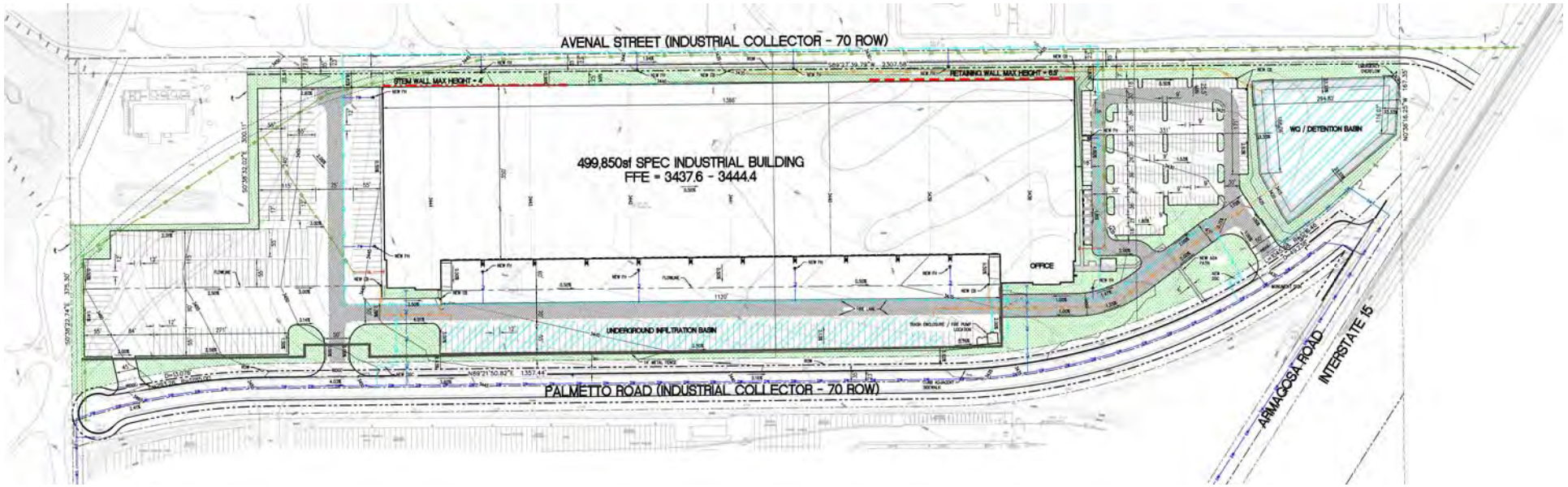


Figure 2
Site Plan

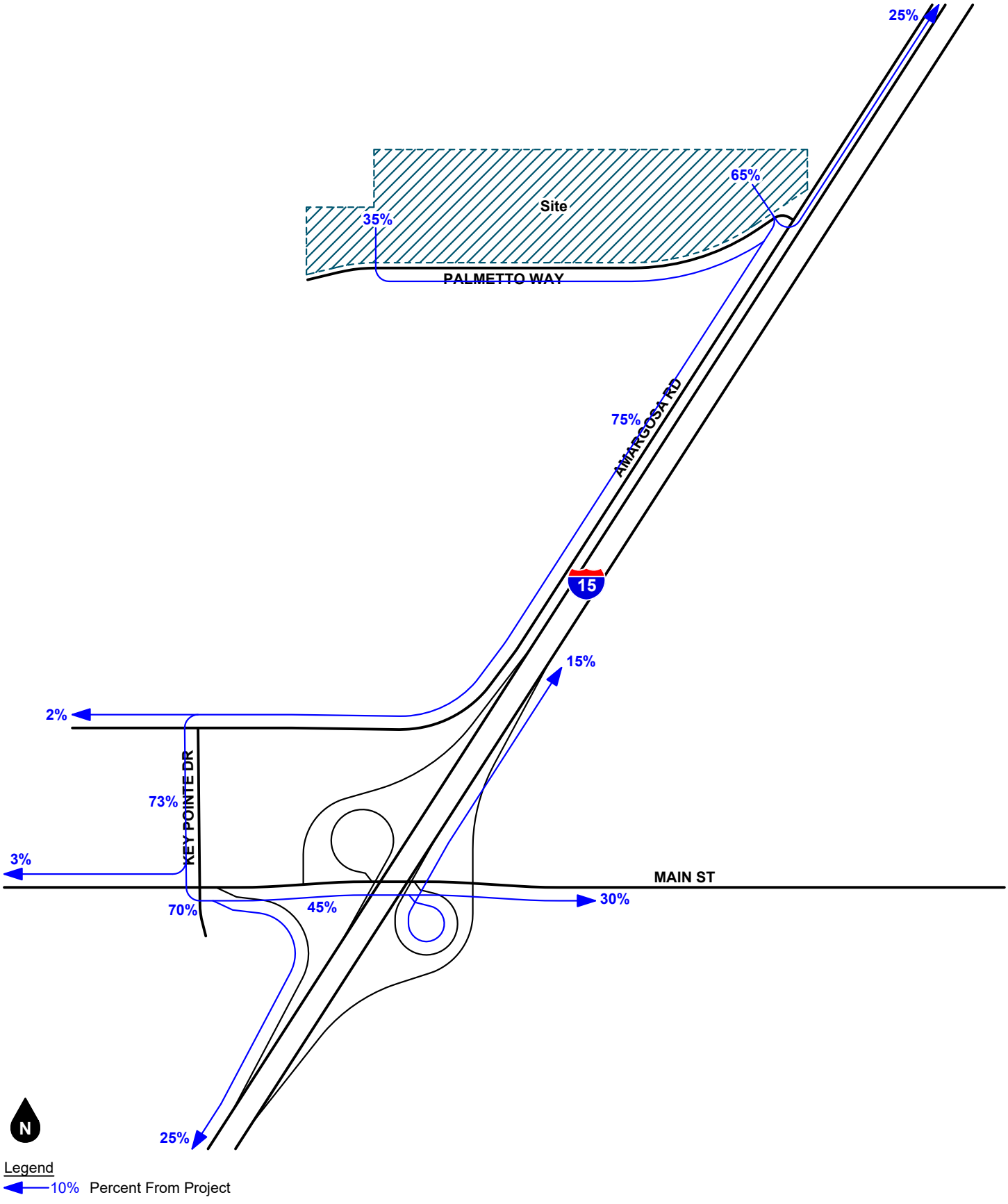


Figure 3
Project Outbound Trip Distribution - Cars

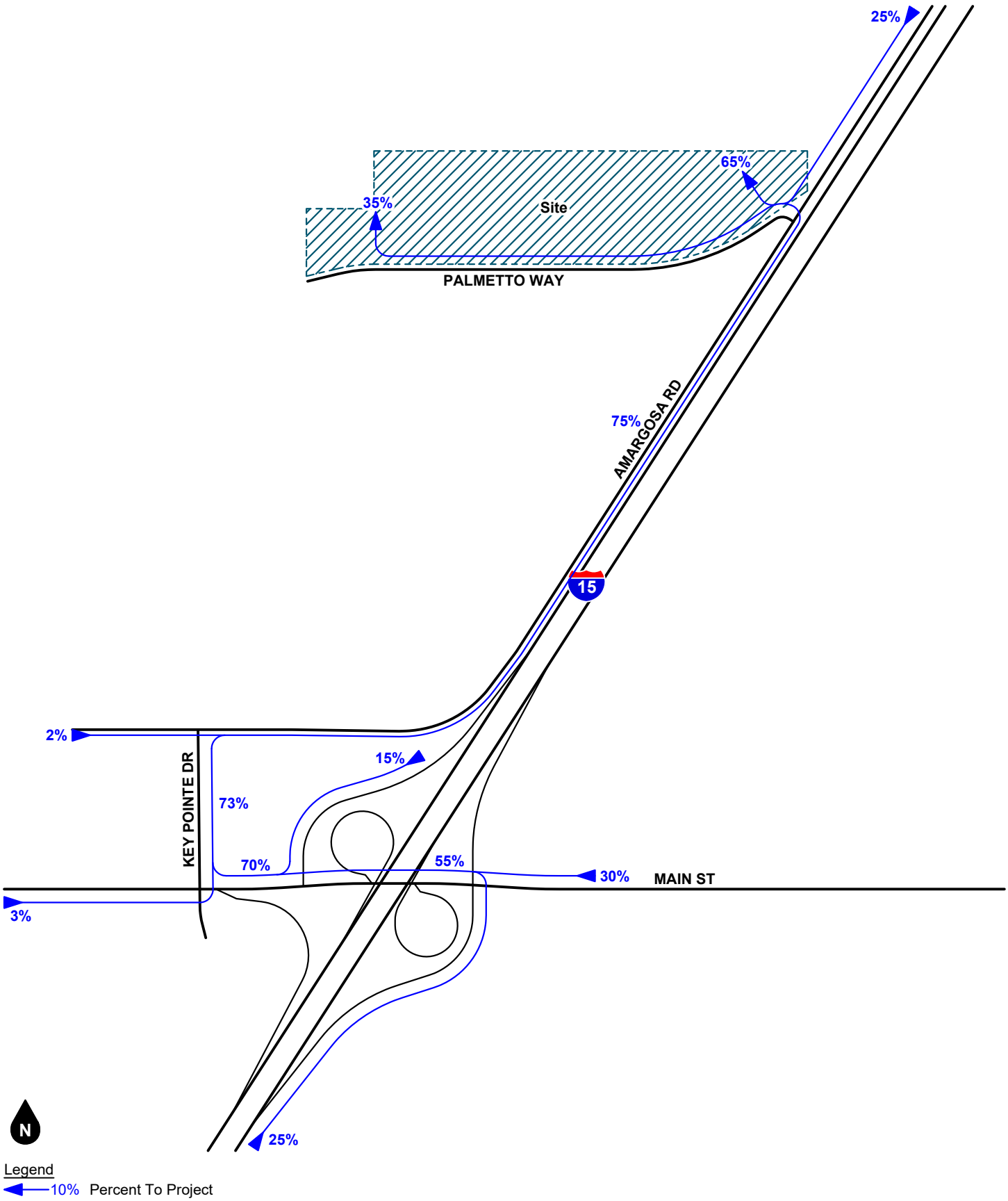


Figure 4
Project Inbound Trip Distribution - Cars

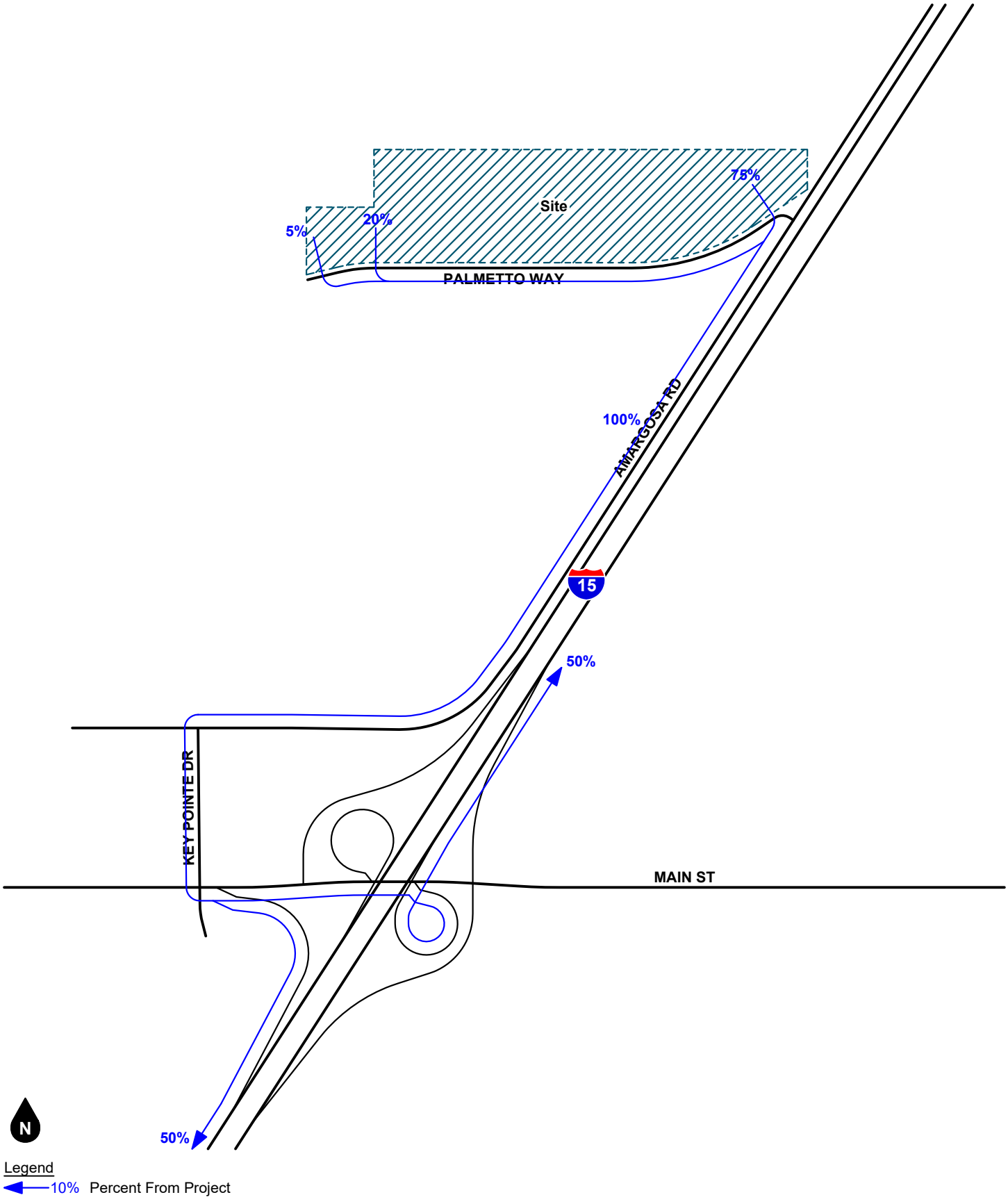


Figure 5
Project Outbound Trip Distribution - Trucks

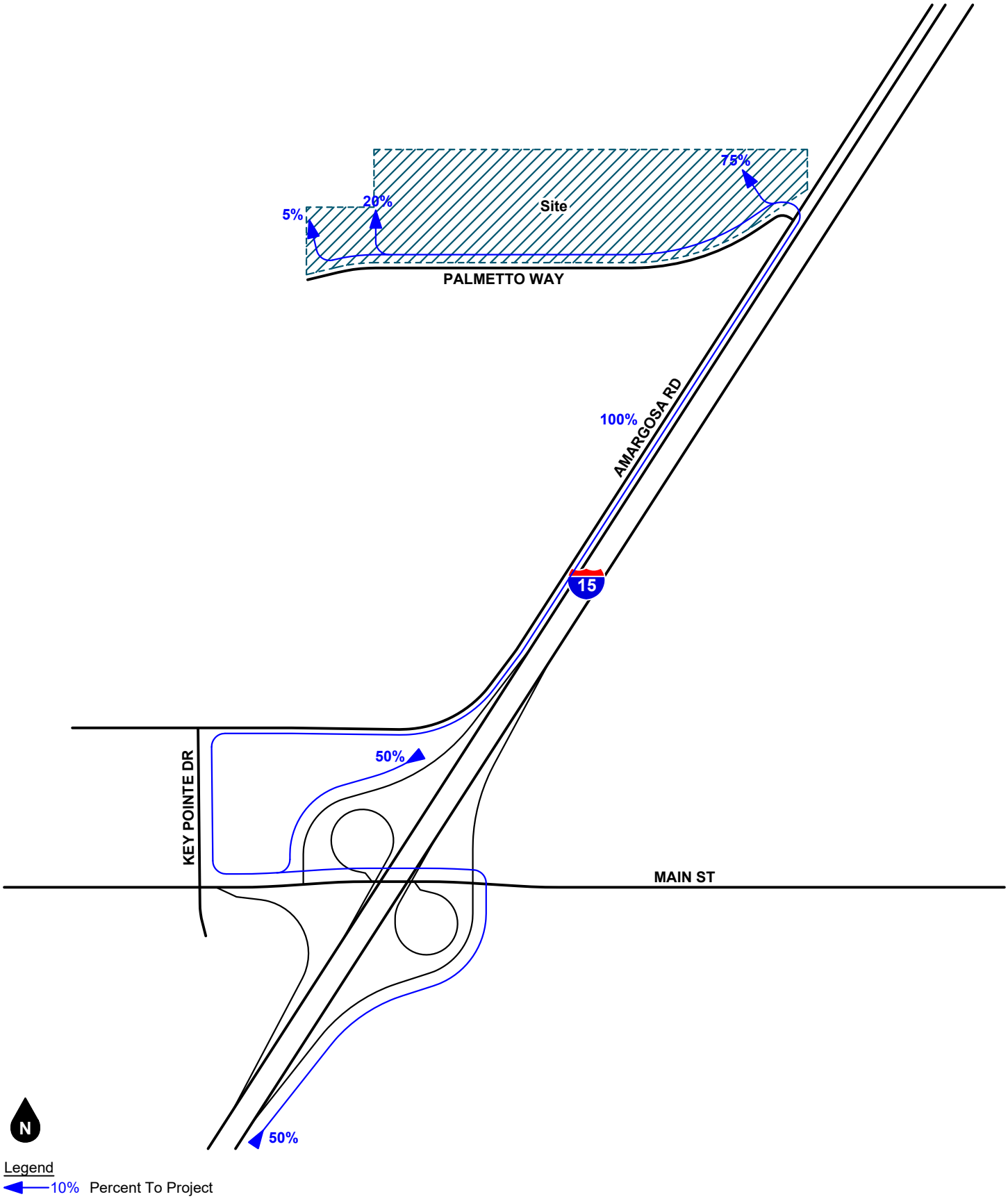


Figure 6
Project Inbound Trip Distribution - Trucks

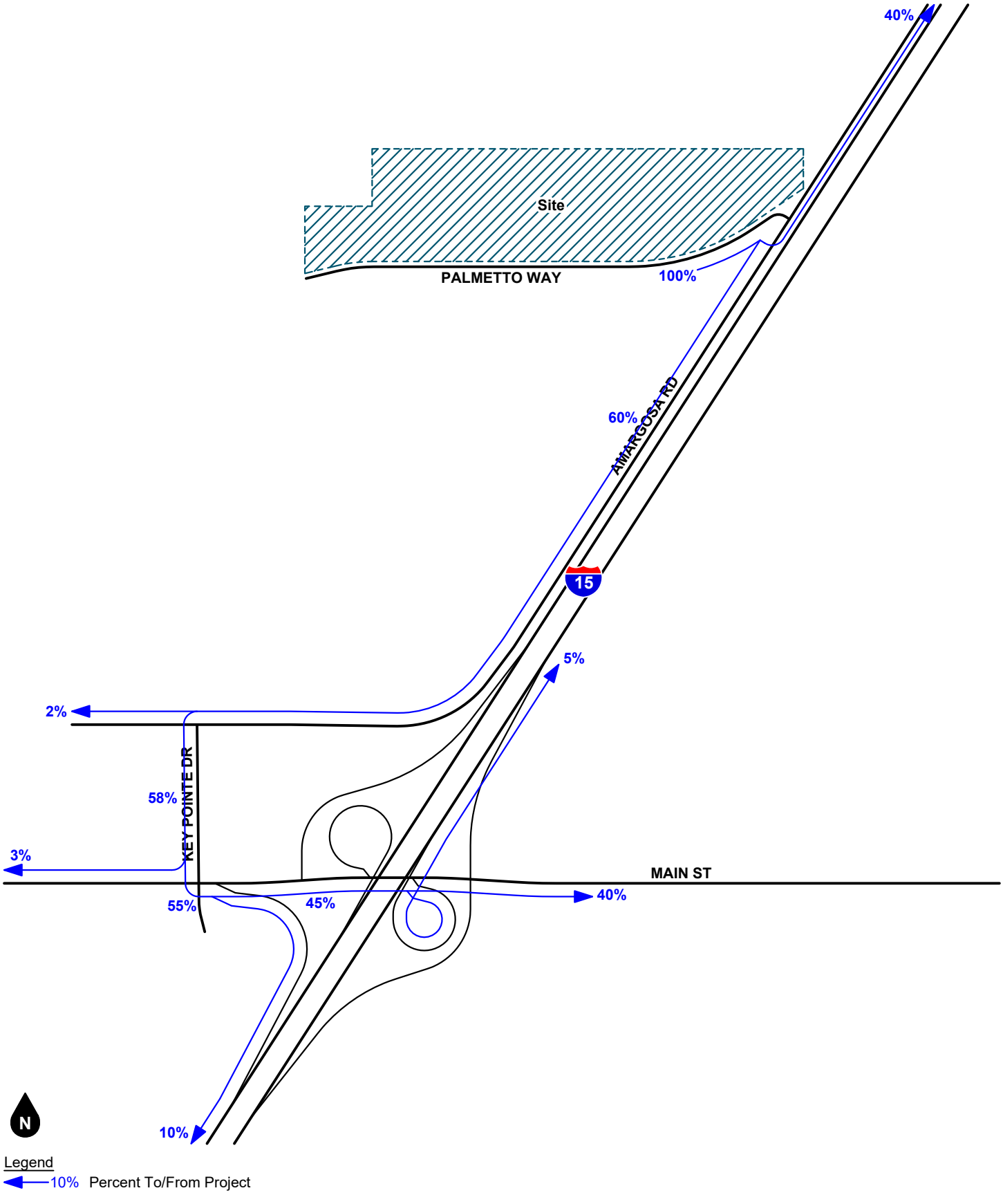


Figure 7
Alternative Land Use Trip Distribution

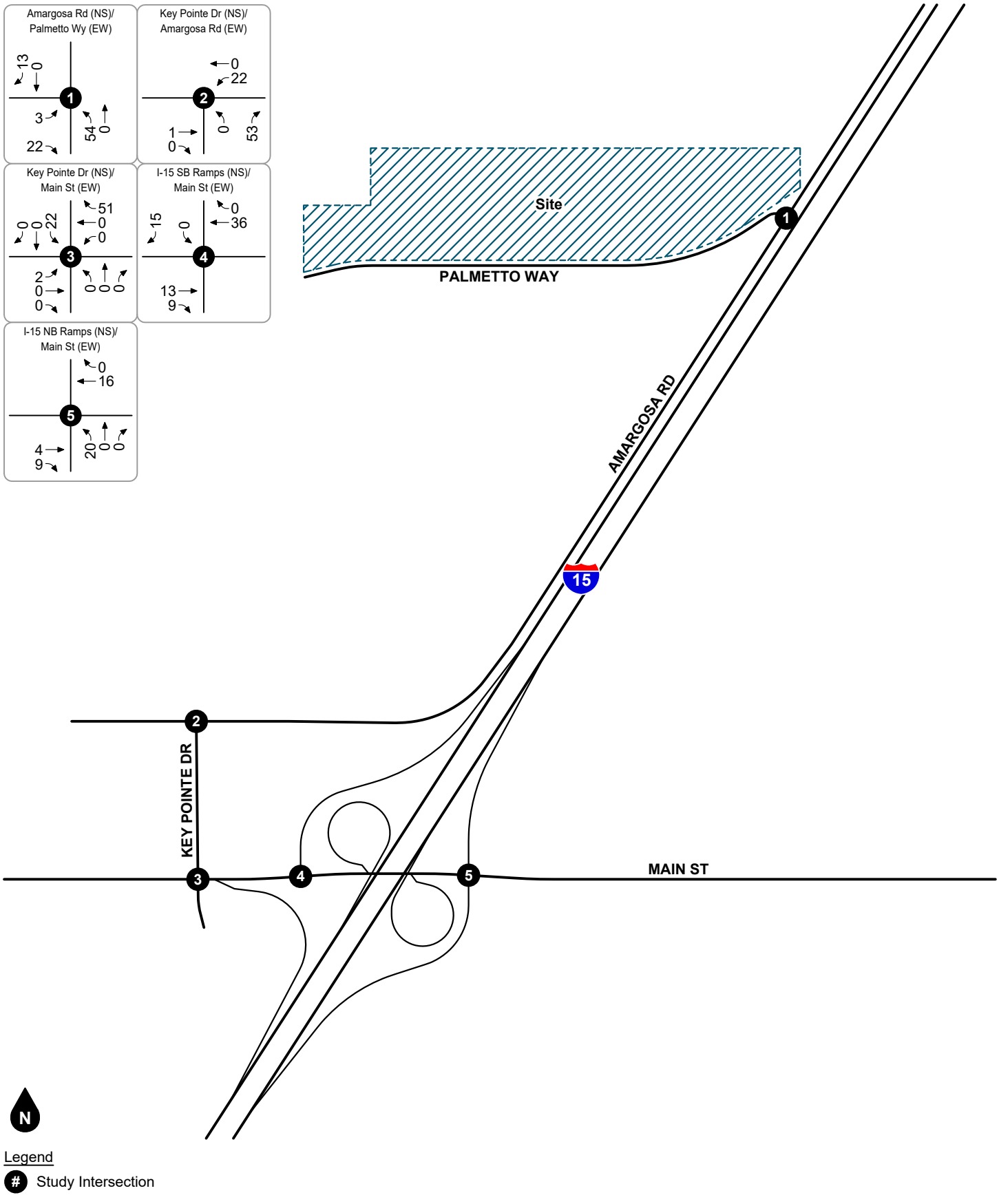


Figure 8
Project AM Peak Hour Intersection Turning Movement Volumes

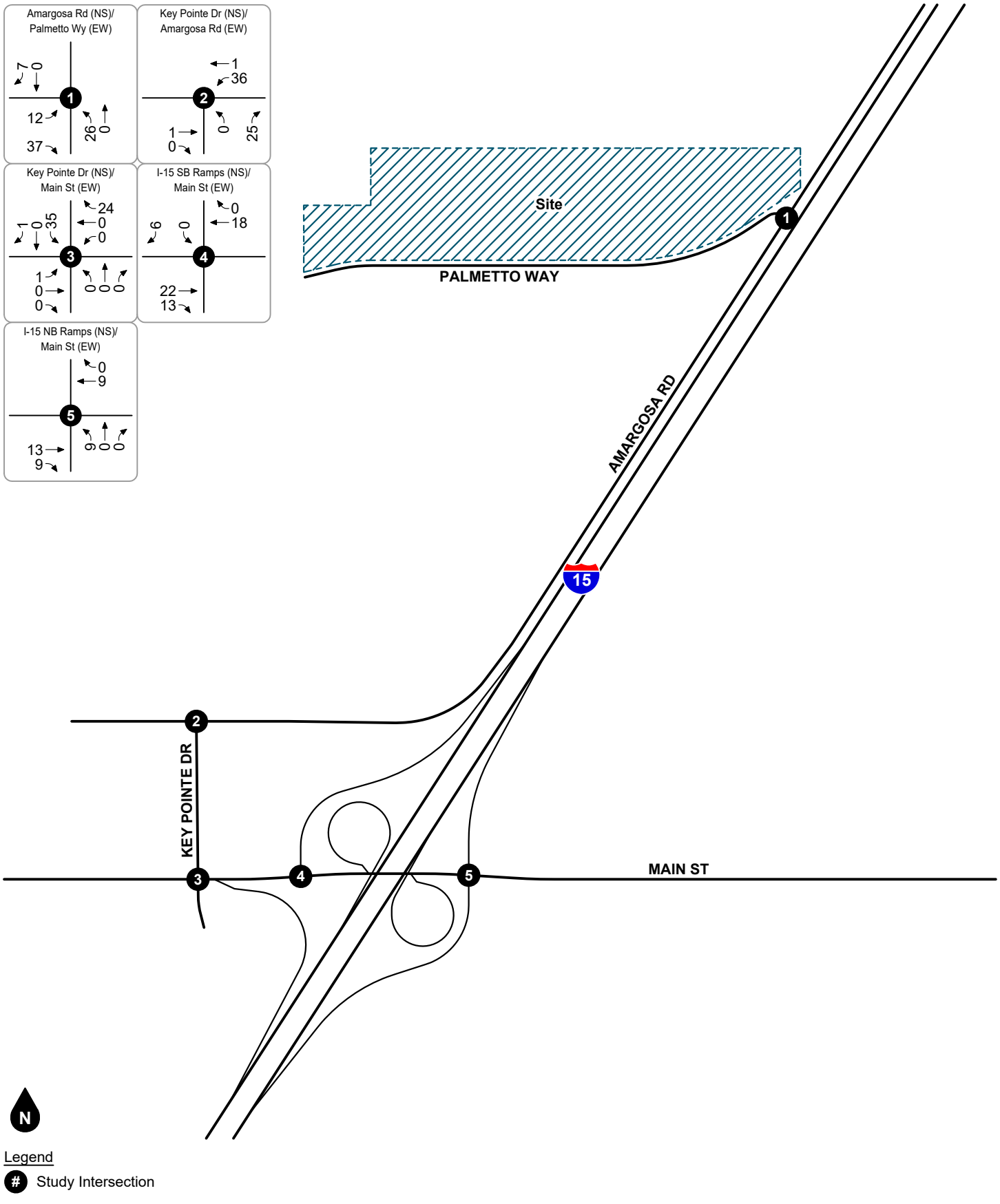
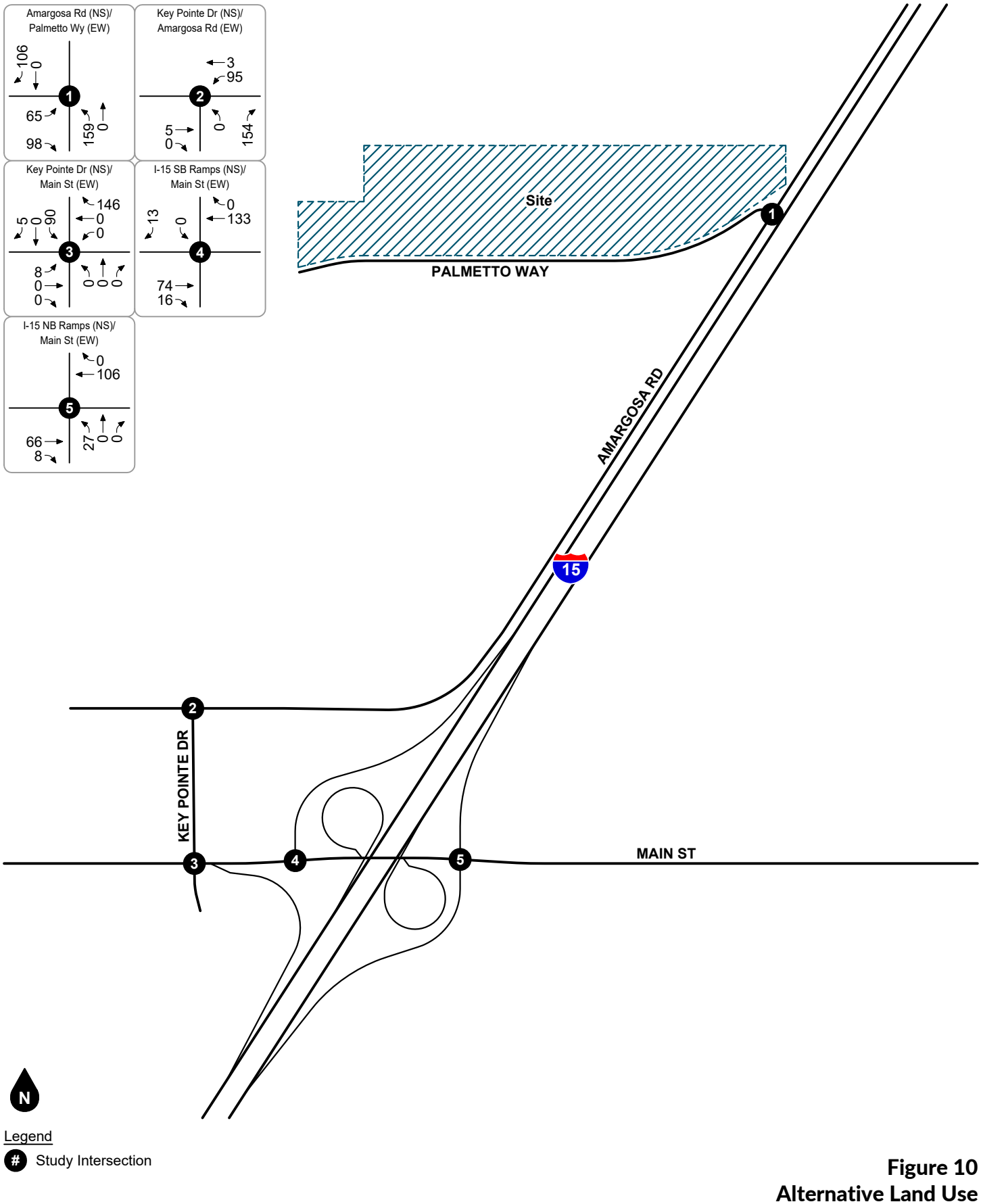


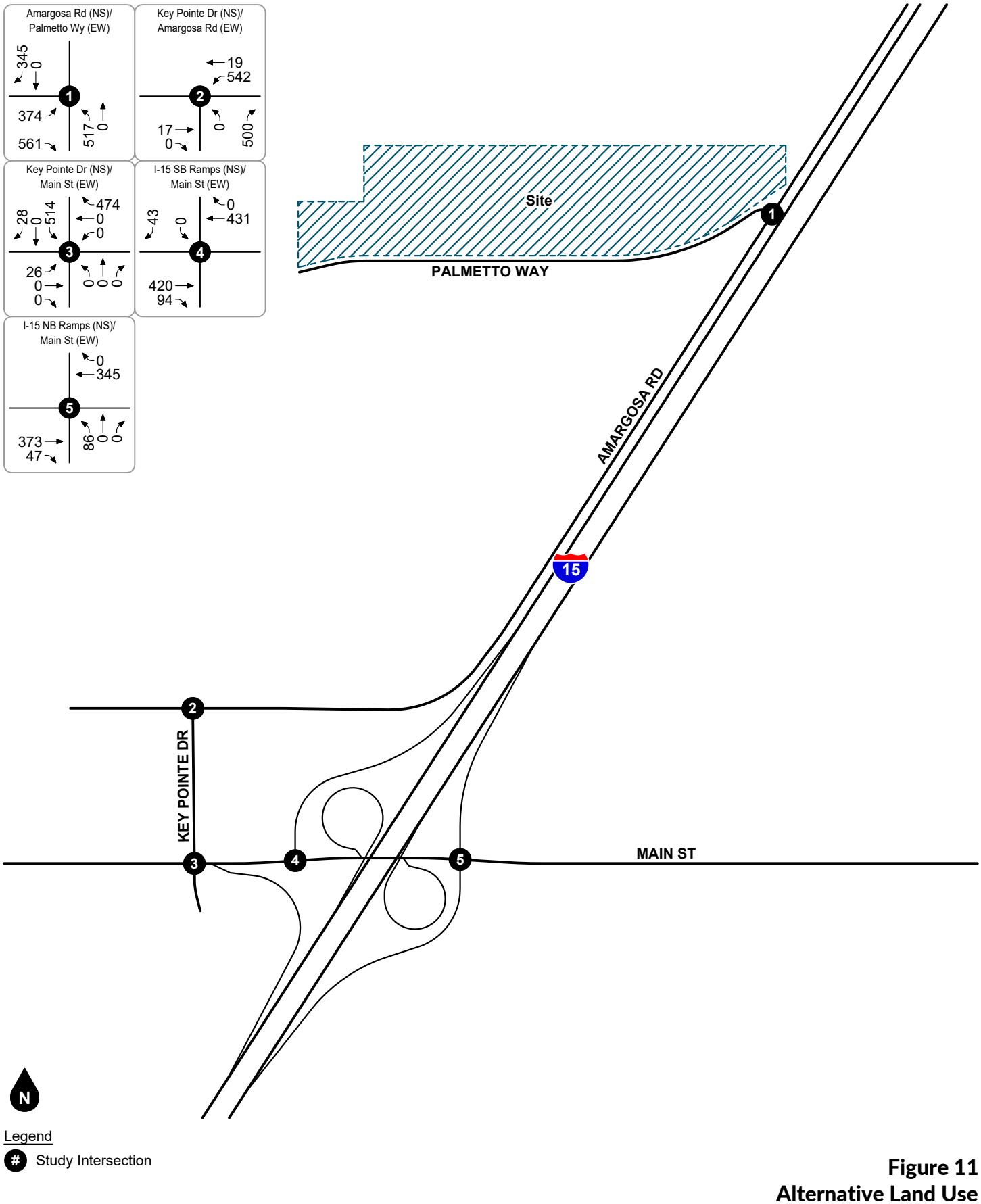
Figure 9
Project PM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

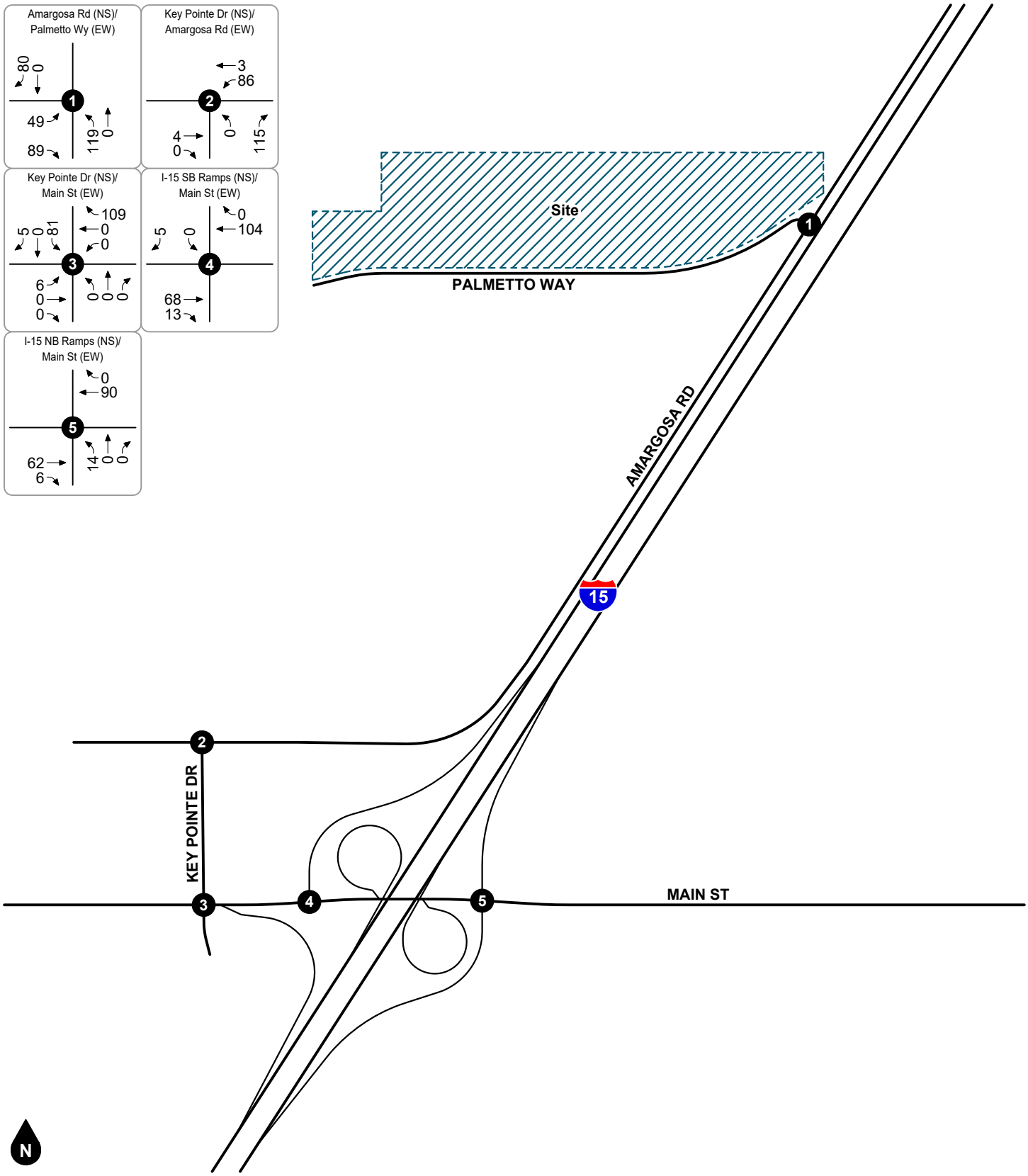
Figure 10
Alternative Land Use
AM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

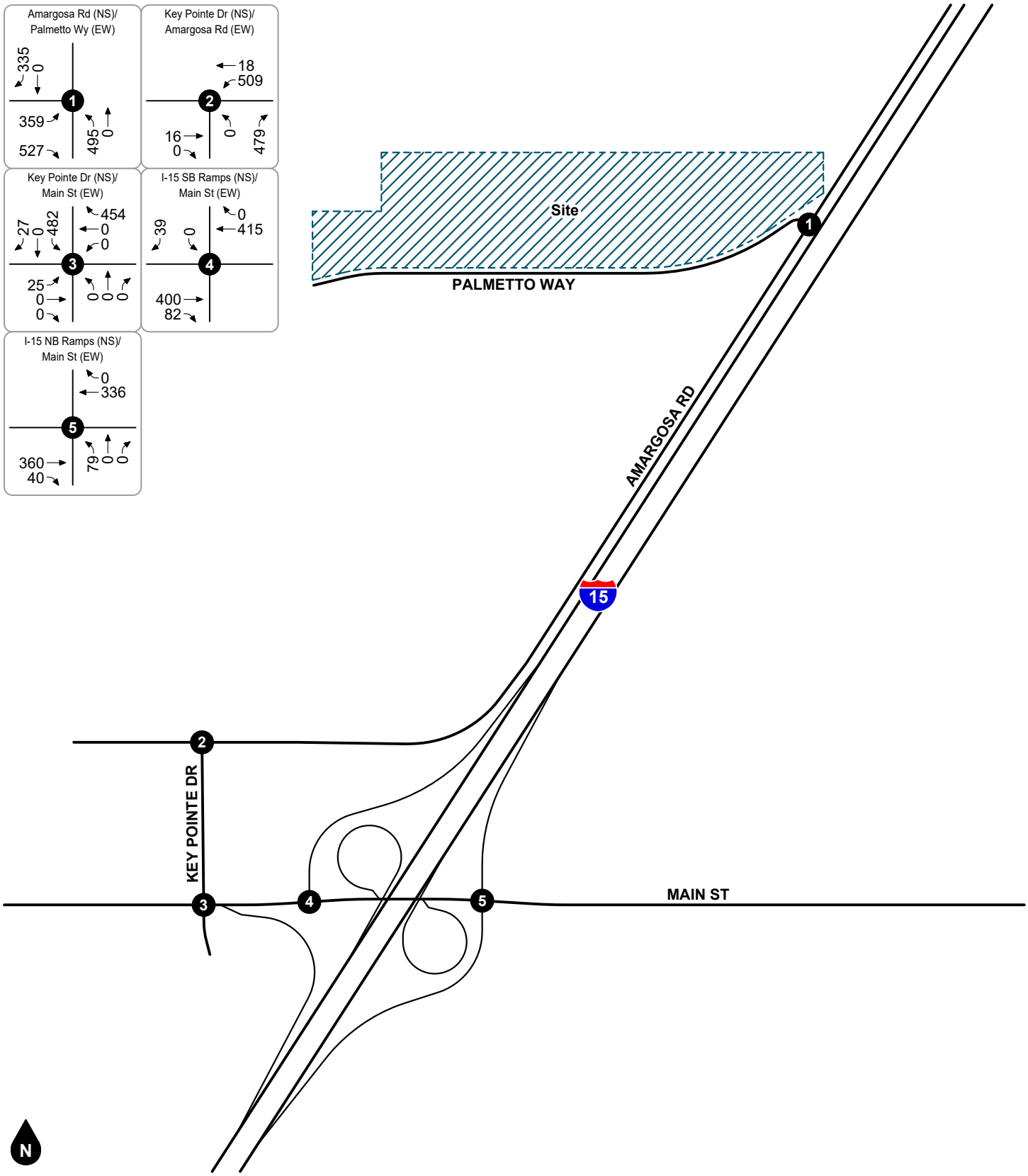
Figure 11
Alternative Land Use
PM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

Figure 12
Additional Alternative Land Use Generated Trips Versus Project Generated Trips
AM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

Figure 13
Additional Alternative Land Use Generated Trips Versus Project Generated Trips
PM Peak Hour Intersection Turning Movement Volumes

APPENDIX E

LEVEL OF SERVICE WORKSHEETS

EXISTING

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro
Report File: C:\...\AME.pdf

Scenario 1 Existing AM Peak Hour
8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.002	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.005	8.7	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.464	14.4	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.344	8.2	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.376	4.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	196	208	0	0	0
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	55	59	0	0	0
Total Analysis Volume [veh/h]	0	221	234	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	0.00	10.94	9.30
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		10.12	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	163	1	7	140
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	48	0	2	41
Total Analysis Volume [veh/h]	0	6	190	1	8	164
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.99	8.74	0.00	0.00	7.53	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.39	0.00	0.00	0.29	0.15
d_A, Approach Delay [s/veh]	8.74		0.00		0.36	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.464

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	26	37	7	3	8	250	2	52	164	36
Total Analysis Volume [veh/h]	4	13	105	148	28	12	32	999	9	208	655	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12	12	12	4	36	36	10	42	42
g / C, Green / Cycle	0.17	0.17	0.17	0.17	0.17	0.06	0.52	0.52	0.14	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.06	0.11	0.02	0.02	0.20	0.01	0.12	0.15	0.15
s, saturation flow rate [veh/h]	1393	1800	1530	1305	1710	1619	4631	1445	1619	3427	1641
c, Capacity [veh/h]	265	298	254	272	283	103	2414	753	229	2055	984
d1, Uniform Delay [s]	27.40	24.53	26.02	29.64	24.90	31.29	10.03	8.07	29.29	6.57	6.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.05	0.95	1.45	0.21	1.56	0.46	0.03	8.77	0.28	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.04	0.38	0.50	0.13	0.29	0.38	0.01	0.84	0.24	0.25
d, Delay for Lane Group [s/veh]	27.42	24.58	26.96	31.10	25.11	32.86	10.49	8.09	38.06	6.85	7.18
Lane Group LOS	C	C	C	C	C	C	B	A	D	A	A
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.17	1.45	2.26	0.52	0.49	2.23	0.05	3.39	1.24	1.29
50th-Percentile Queue Length [ft/ln]	1.47	4.14	36.20	56.47	13.01	12.14	55.84	1.24	84.64	31.11	32.33
95th-Percentile Queue Length [veh/ln]	0.11	0.30	2.61	4.07	0.94	0.87	4.02	0.09	6.09	2.24	2.33
95th-Percentile Queue Length [ft/ln]	2.65	7.45	65.16	101.65	23.42	21.85	100.50	2.24	152.36	56.00	58.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.42	24.58	26.96	31.10	25.11	25.11	32.86	10.49	8.09	38.06	6.91	7.18
Movement LOS	C	C	C	C	C	C	C	B	A	D	A	A
d_A, Approach Delay [s/veh]	26.73			29.82			11.17			13.40		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.41											
Intersection LOS	B											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	2.203	2.042	3.042	3.263
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	828	828	543	543
d_b, Bicycle Delay [s]	12.01	12.01	18.58	18.58
l_b,int, Bicycle LOS Score for Intersection	1.746	1.847	2.090	2.072
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.344

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	308	0	177	0	1009	0	0	756	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	82	0	47	0	267	0	0	200	0
Total Analysis Volume [veh/h]	0	0	0	326	0	188	0	1069	0	0	801	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		10	10	42	42	42	42
g / C, Green / Cycle		0.17	0.17	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate		0.10	0.12	0.21	0.00	0.15	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		499	258	3425	1069	3425	1069
d1, Uniform Delay [s]		23.22	23.53	3.45	0.00	3.24	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.25	3.27	0.22	0.00	0.15	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.62	0.69	0.29	0.00	0.22	0.00
d, Delay for Lane Group [s/veh]		24.47	26.80	3.67	0.00	3.38	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		1.98	2.44	0.59	0.00	0.68	0.00
50th-Percentile Queue Length [ft/ln]		49.49	60.97	14.74	0.00	17.10	0.00
95th-Percentile Queue Length [veh/ln]		3.56	4.39	1.06	0.00	1.23	0.00
95th-Percentile Queue Length [ft/ln]		89.09	109.74	26.54	0.00	30.77	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.47	0.00	26.80	0.00	3.67	0.00	0.00	3.38	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			25.32			3.67			3.38		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	8.24											
Intersection LOS	A											
Intersection V/C	0.344											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.230	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.115	1.975
Bicycle LOS	D	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.376

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	3	41	0	0	0	0	1016	0	0	1103	461
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	1	11	0	0	0	0	265	0	0	287	120
Total Analysis Volume [veh/h]	85	3	43	0	0	0	0	1058	0	0	1149	480
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	16	0	0	0	0	0	69	0	0	69	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	85	85	85		85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		68	68	68	68
g / C, Green / Cycle	0.11	0.11	0.11		0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.05	0.01	0.01		0.21	0.00	0.22	0.30
s, saturation flow rate [veh/h]	1714	1562	1530		4903	1530	4903	1530
c, Capacity [veh/h]	194	177	173		3888	1213	3888	1213
d1, Uniform Delay [s]	35.19	33.98	33.99		2.30	0.00	2.35	2.61
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.47	0.32	0.33		0.16	0.00	0.18	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.13	0.13		0.26	0.00	0.28	0.38
d, Delay for Lane Group [s/veh]	36.66	34.30	34.32		2.47	0.00	2.54	3.52
Lane Group LOS	D	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.64	0.42	0.42		0.52	0.00	0.58	1.02
50th-Percentile Queue Length [ft/ln]	40.94	10.53	10.44		13.06	0.00	14.52	25.56
95th-Percentile Queue Length [veh/ln]	2.95	0.76	0.75		0.94	0.00	1.05	1.84
95th-Percentile Queue Length [ft/ln]	73.69	18.96	18.79		23.52	0.00	26.14	46.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.66	34.30	34.31	0.00	0.00	0.00	0.00	2.47	0.00	0.00	2.54	3.52
Movement LOS	D	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	35.84			0.00			2.47			2.83		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	4.23											
Intersection LOS	A											
Intersection V/C	0.376											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.02	34.02	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.161	1.875	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	282	0	1528	1528
d_b, Bicycle Delay [s]	31.39	42.54	2.37	2.37
l_b,int, Bicycle LOS Score for Intersection	1.768	4.132	2.118	2.420
Bicycle LOS	A	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro
Report File: C:\...\PME.pdf

Scenario 1 Existing PM Peak Hour
8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.1	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.006	12.1	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.659	22.2	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.524	10.8	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.628	12.1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	443	417	0	0	0
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	121	114	0	0	0
Total Analysis Volume [veh/h]	1	484	456	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.12	0.00	0.00	0.00	15.98	10.62
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.02		0.00		13.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	19	287	9	12	335
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	77	2	3	89
Total Analysis Volume [veh/h]	3	20	307	10	13	358
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.07	9.19	0.00	0.00	7.83	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.07	0.00	0.00	0.02	0.01
95th-Percentile Queue Length [ft/ln]	0.44	1.66	0.00	0.00	0.50	0.25
d_A, Approach Delay [s/veh]	9.58		0.00		0.27	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.659

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	62	61	22	4	12	249	5	76	286	50
Total Analysis Volume [veh/h]	32	59	248	243	86	15	47	998	19	303	1143	200
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	19	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	6	26	26	15	35	35
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.08	0.34	0.34	0.20	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.21	0.06	0.03	0.21	0.01	0.18	0.26	0.26
s, saturation flow rate [veh/h]	1317	1800	1530	1098	1753	1619	4631	1445	1619	3427	1666
c, Capacity [veh/h]	390	532	453	363	519	134	1594	497	324	1582	769
d1, Uniform Delay [s]	23.16	19.21	22.09	27.39	19.72	32.50	20.41	16.34	29.36	14.62	14.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.09	0.98	1.99	0.18	1.52	1.75	0.14	11.43	1.42	2.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.11	0.53	0.65	0.19	0.34	0.61	0.04	0.91	0.55	0.56
d, Delay for Lane Group [s/veh]	23.24	19.30	23.06	29.37	19.90	34.02	22.16	16.48	40.78	16.03	17.53
Lane Group LOS	C	B	C	C	B	C	C	B	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.43	0.71	3.50	4.08	1.26	0.78	4.29	0.20	5.67	4.69	4.88
50th-Percentile Queue Length [ft/ln]	10.79	17.69	87.45	101.94	31.59	19.56	107.34	4.96	141.83	117.15	122.01
95th-Percentile Queue Length [veh/ln]	0.78	1.27	6.30	7.34	2.27	1.41	7.69	0.36	9.58	8.24	8.50
95th-Percentile Queue Length [ft/ln]	19.42	31.84	157.41	183.49	56.85	35.20	192.29	8.94	239.49	205.91	212.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.24	19.30	23.06	29.37	19.90	19.90	34.02	22.16	16.48	40.78	16.35	17.53
Movement LOS	C	B	C	C	B	B	C	C	B	D	B	B
d_A, Approach Delay [s/veh]	22.43			26.57			22.59			21.00		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.21											
Intersection LOS	C											
Intersection V/C	0.659											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.05	29.05	29.05	29.05
l_p,int, Pedestrian LOS Score for Intersection	2.300	2.138	3.207	3.629
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	773	773	507	640
d_b, Bicycle Delay [s]	14.12	14.12	20.92	17.35
l_b,int, Bicycle LOS Score for Intersection	2.102	2.112	2.128	2.440
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.524

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	443	0	351	0	1272	0	0	1253	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	113	0	90	0	324	0	0	320	0
Total Analysis Volume [veh/h]	0	0	0	452	0	358	0	1298	0	0	1279	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		17	17	35	35	35	35
g / C, Green / Cycle		0.29	0.29	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate		0.15	0.23	0.26	0.00	0.26	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		849	439	2845	888	2845	888
d1, Uniform Delay [s]		18.01	19.87	7.16	0.00	7.12	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.50	3.51	0.51	0.00	0.50	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.52	0.80	0.45	0.00	0.44	0.00
d, Delay for Lane Group [s/veh]		18.51	23.38	7.67	0.00	7.62	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.41	4.55	1.97	0.00	2.44	0.00
50th-Percentile Queue Length [ft/ln]		60.36	113.65	49.15	0.00	60.88	0.00
95th-Percentile Queue Length [veh/ln]		4.35	8.04	3.54	0.00	4.38	0.00
95th-Percentile Queue Length [ft/ln]		108.64	201.07	88.46	0.00	109.59	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.51	0.00	23.38	0.00	7.67	0.00	0.00	7.62	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			20.66			7.67			7.62		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.76											
Intersection LOS	B											
Intersection V/C	0.524											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.305	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.259	2.249
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.628

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	190	4	772	0	0	0	0	1448	0	0	1529	404
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	1	198	0	0	0	0	372	0	0	393	104
Total Analysis Volume [veh/h]	195	4	793	0	0	0	0	1488	0	0	1571	415
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19		33	33	33	33
g / C, Green / Cycle	0.31	0.31	0.31		0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.11	0.25	0.25		0.30	0.00	0.31	0.26
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	538	481	480		2712	846	2712	846
d1, Uniform Delay [s]	15.94	18.97	18.98		8.53	0.00	8.73	8.17
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	3.34	3.37		0.76	0.00	0.86	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.81	0.81		0.53	0.00	0.56	0.48
d, Delay for Lane Group [s/veh]	16.33	22.31	22.35		9.29	0.00	9.59	10.10
Lane Group LOS	B	C	C		A	A	A	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.89	4.91	4.91		2.69	0.00	2.92	2.46
50th-Percentile Queue Length [ft/ln]	47.36	122.72	122.86		67.29	0.00	72.98	61.50
95th-Percentile Queue Length [veh/ln]	3.41	8.54	8.55		4.84	0.00	5.25	4.43
95th-Percentile Queue Length [ft/ln]	85.24	213.56	213.75		121.12	0.00	131.37	110.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.33	22.31	22.33	0.00	0.00	0.00	0.00	9.29	0.00	0.00	9.59	10.10
Movement LOS	B	C	C					A	A		A	B
d_A, Approach Delay [s/veh]	21.15			0.00			9.29			9.70		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	12.11											
Intersection LOS	B											
Intersection V/C	0.628											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.347	1.802	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.154	4.132	2.356	2.623
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2024) WITHOUT PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro
Scenario 2 Opening Year (2024) Without Project AM Peak Hour

Report File: C:\...\AMOYWO.pdf
8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.002	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.055	9.0	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.526	14.8	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.479	9.9	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.470	5.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	12	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	207	228	0	0	0
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	58	64	0	0	0
Total Analysis Volume [veh/h]	0	233	257	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	0.00	11.18	9.41
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		10.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.055

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	1	0	21	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	53	171	1	28	146
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	50	0	8	43
Total Analysis Volume [veh/h]	0	62	200	1	33	171
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	10.47	8.96	0.00	0.00	7.57	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.05	0.02
95th-Percentile Queue Length [ft/ln]	0.00	4.37	0.00	0.00	1.19	0.59
d_A, Approach Delay [s/veh]	8.96		0.00		1.22	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.526

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	21	0	0	1	106	0	0	435	47
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	101	164	27	11	32	1069	8	201	1067	184
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	27	44	7	3	9	288	2	54	288	50
Total Analysis Volume [veh/h]	4	13	109	177	29	12	35	1153	9	217	1151	198
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	13	5	35	35	10	40	40
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.19	0.07	0.50	0.50	0.14	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.13	0.02	0.02	0.23	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1391	1800	1530	1300	1713	1619	4631	1445	1619	3427	1668
c, Capacity [veh/h]	294	338	287	299	322	108	2305	719	231	1968	958
d1, Uniform Delay [s]	26.11	23.26	24.73	28.90	23.62	31.12	11.48	8.88	29.37	8.42	8.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.04	0.73	1.58	0.16	1.52	0.67	0.03	10.60	0.68	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.04	0.35	0.55	0.12	0.30	0.46	0.01	0.87	0.43	0.43
d, Delay for Lane Group [s/veh]	26.13	23.30	25.47	30.48	23.79	32.64	12.16	8.91	39.97	9.10	9.82
Lane Group LOS	C	C	C	C	C	C	B	A	D	A	A
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.16	1.45	2.69	0.52	0.51	2.92	0.05	3.64	2.70	2.82
50th-Percentile Queue Length [ft/ln]	1.43	3.99	36.30	67.13	12.88	12.86	73.07	1.35	90.92	67.56	70.53
95th-Percentile Queue Length [veh/ln]	0.10	0.29	2.61	4.83	0.93	0.93	5.26	0.10	6.55	4.86	5.08
95th-Percentile Queue Length [ft/ln]	2.57	7.18	65.35	120.83	23.19	23.15	131.53	2.42	163.66	121.60	126.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.13	23.30	25.47	30.48	23.79	23.79	32.64	12.16	8.91	39.97	9.25	9.82
Movement LOS	C	C	C	C	C	C	C	B	A	D	A	A
d_A, Approach Delay [s/veh]	25.27			29.22			12.72			13.58		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.82											
Intersection LOS	B											
Intersection V/C	0.526											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.59	26.59	26.59	26.59
l_p,int, Pedestrian LOS Score for Intersection	2.206	2.069	3.165	3.463
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	828	828	543	543
d_b, Bicycle Delay [s]	12.02	12.02	18.59	18.59
l_b,int, Bicycle LOS Score for Intersection	1.753	1.893	2.170	2.358
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.479

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	142	0	96	31	0	340	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	320	0	326	0	1146	31	0	1127	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	0	86	0	303	8	0	298	0
Total Analysis Volume [veh/h]	0	0	0	339	0	345	0	1214	33	0	1194	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		16	16	36	36	36	36
g / C, Green / Cycle		0.26	0.26	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate		0.11	0.21	0.23	0.02	0.23	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		786	406	2949	920	2949	920
d1, Uniform Delay [s]		18.20	20.63	6.24	4.88	6.21	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.34	3.84	0.39	0.07	0.38	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.41	0.80	0.39	0.03	0.38	0.00
d, Delay for Lane Group [s/veh]		18.54	24.48	6.62	4.95	6.58	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		1.72	4.33	1.52	0.11	1.93	0.00
50th-Percentile Queue Length [ft/ln]		43.07	108.16	38.08	2.68	48.33	0.00
95th-Percentile Queue Length [veh/ln]		3.10	7.74	2.74	0.19	3.48	0.00
95th-Percentile Queue Length [ft/ln]		77.53	193.44	68.55	4.83	87.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.54	0.00	24.48	0.00	6.62	4.95	0.00	6.58	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			21.54			6.58			6.58		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.86											
Intersection LOS	A											
Intersection V/C	0.479											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.269	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.207	2.179
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.470

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	108	0	0	0	0	0	0	56	40	0	232	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	3	43	0	0	0	0	1113	40	0	1380	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	1	11	0	0	0	0	290	10	0	359	125
Total Analysis Volume [veh/h]	201	3	45	0	0	0	0	1159	42	0	1438	500
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	65	65	65		65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		47	47	47	47
g / C, Green / Cycle	0.15	0.15	0.15		0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.11	0.01	0.01		0.23	0.03	0.28	0.31
s, saturation flow rate [veh/h]	1714	1560	1530		4903	1530	4903	1530
c, Capacity [veh/h]	263	240	235		3548	1107	3548	1107
d1, Uniform Delay [s]	26.32	23.70	23.71		3.22	2.56	3.46	3.63
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.02	0.17	0.18		0.23	0.06	0.32	1.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.10	0.10		0.31	0.04	0.39	0.43
d, Delay for Lane Group [s/veh]	30.33	23.88	23.88		3.45	2.62	3.79	4.87
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.00	0.30	0.30		0.65	0.07	0.87	1.22
50th-Percentile Queue Length [ft/ln]	74.97	7.60	7.50		16.20	1.69	21.71	30.38
95th-Percentile Queue Length [veh/ln]	5.40	0.55	0.54		1.17	0.12	1.56	2.19
95th-Percentile Queue Length [ft/ln]	134.95	13.69	13.49		29.15	3.04	39.09	54.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.33	23.88	23.88	0.00	0.00	0.00	0.00	3.45	2.62	0.00	3.79	4.87
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	29.09			0.00			3.42			4.07		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	5.68											
Intersection LOS	A											
Intersection V/C	0.470											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.17	24.17	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.184	1.879	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	0	584	584
d_b, Bicycle Delay [s]	5.64	32.55	16.32	16.32
l_b,int, Bicycle LOS Score for Intersection	1.954	4.132	2.194	2.583
Bicycle LOS	A	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 2 Opening Year (2024) Without Project PM Peak Hour

Report File: C:\...\PMOYWO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.2	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.007	13.2	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.795	28.8	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.677	13.0	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.685	13.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	471	441	0	0	0
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	120	0	0	0
Total Analysis Volume [veh/h]	1	515	482	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.19	0.00	0.00	0.00	16.79	10.80
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.02		0.00		13.80	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	1	0	32	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	44	300	9	44	350
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	12	80	2	12	93
Total Analysis Volume [veh/h]	3	47	321	10	47	374
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	13.23	9.36	0.00	0.00	7.90	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.16	0.00	0.00	0.08	0.04
95th-Percentile Queue Length [ft/ln]	0.51	3.99	0.00	0.00	1.88	0.94
d_A, Approach Delay [s/veh]	9.60		0.00		0.88	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.795

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	31	0	1	1	402	0	0	267	23
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	59	251	277	87	17	49	1411	19	307	1423	225
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	65	71	22	4	13	363	5	79	366	58
Total Analysis Volume [veh/h]	33	61	258	285	90	17	50	1452	20	316	1464	231
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	49	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	42	42	22	56	56
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.28	0.07	0.40	0.40	0.21	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.25	0.06	0.03	0.30	0.01	0.19	0.32	0.32
s, saturation flow rate [veh/h]	1311	1800	1530	1086	1750	1619	4631	1445	1619	3427	1678
c, Capacity [veh/h]	348	497	423	323	483	119	1844	576	342	1838	900
d1, Uniform Delay [s]	33.37	28.47	32.94	41.23	29.28	46.56	27.38	19.29	40.35	16.67	16.73
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.11	1.34	7.01	0.22	2.30	3.15	0.11	9.46	1.47	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.12	0.59	0.86	0.22	0.41	0.77	0.03	0.90	0.60	0.61
d, Delay for Lane Group [s/veh]	33.48	28.57	34.28	48.24	29.50	48.86	30.53	19.39	49.81	18.14	19.79
Lane Group LOS	C	C	C	D	C	D	C	B	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.67	1.13	5.63	7.86	2.05	1.25	9.84	0.28	8.19	8.29	8.61
50th-Percentile Queue Length [ft/ln]	16.74	28.18	140.86	196.62	51.16	31.29	246.08	7.05	204.70	207.33	215.15
95th-Percentile Queue Length [veh/ln]	1.21	2.03	9.53	12.46	3.68	2.25	14.99	0.51	12.88	13.02	13.42
95th-Percentile Queue Length [ft/ln]	30.14	50.72	238.18	311.60	92.09	56.32	374.72	12.69	322.02	325.40	335.43

Movement, Approach, & Intersection Results

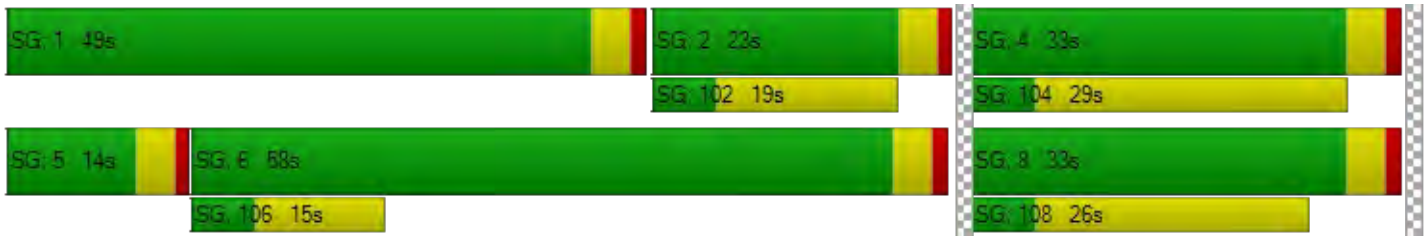
d_M, Delay for Movement [s/veh]	33.48	28.57	34.28	48.24	29.50	29.50	48.86	30.53	19.39	49.81	18.51	19.79
Movement LOS	C	C	C	D	C	C	D	C	B	D	B	B
d_A, Approach Delay [s/veh]	33.22			43.13			30.99			23.57		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	28.80											
Intersection LOS	C											
Intersection V/C	0.795											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.92	43.92	43.92	43.92
l_p,int, Pedestrian LOS Score for Intersection	2.324	2.181	3.379	3.901
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	552	552	362	1028
d_b, Bicycle Delay [s]	27.54	27.54	35.25	12.41
l_b,int, Bicycle LOS Score for Intersection	2.124	2.188	2.373	2.635
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.677

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	84	0	338	95	0	206	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	461	0	449	0	1661	95	0	1510	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	118	0	115	0	424	24	0	385	0
Total Analysis Volume [veh/h]	0	0	0	470	0	458	0	1695	97	0	1541	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	31	31	31	31
g / C, Green / Cycle		0.35	0.35	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.16	0.29	0.34	0.06	0.31	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		1031	533	2543	794	2543	794
d1, Uniform Delay [s]		15.12	18.07	10.53	7.42	10.06	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.31	3.86	1.33	0.31	1.03	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.45	0.84	0.65	0.12	0.59	0.00
d, Delay for Lane Group [s/veh]		15.43	21.93	11.86	7.73	11.09	0.00
Lane Group LOS		B	C	B	A	B	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.23	5.65	3.85	0.50	3.98	0.00
50th-Percentile Queue Length [ft/ln]		55.68	141.32	96.36	12.41	99.50	0.00
95th-Percentile Queue Length [veh/ln]		4.01	9.55	6.94	0.89	7.16	0.00
95th-Percentile Queue Length [ft/ln]		100.22	238.80	173.45	22.34	179.11	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.43	0.00	21.93	0.00	11.86	7.73	0.00	11.09	0.00
Movement LOS				B		C		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			18.63			11.64			11.09		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.70	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.334	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1099	633	633
d_b, Bicycle Delay [s]	30.03	6.09	14.03	14.03
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.525	2.390
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.685

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	0	0	0	0	0	0	212	126	0	141	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	263	4	803	0	0	0	0	1718	126	0	1732	420
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	1	206	0	0	0	0	441	32	0	445	108
Total Analysis Volume [veh/h]	270	4	825	0	0	0	0	1766	129	0	1780	432
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		33	33	33	33
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.15	0.26	0.26		0.35	0.08	0.35	0.27
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	560	501	500		2649	827	2649	827
d1, Uniform Delay [s]	16.12	18.52	18.53		9.79	6.93	9.83	8.77
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	3.20	3.22		1.25	0.39	1.28	2.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.81	0.81		0.65	0.15	0.65	0.51
d, Delay for Lane Group [s/veh]	16.73	21.72	21.75		11.04	7.32	11.11	11.01
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.70	5.03	5.04		3.72	0.62	3.77	2.75
50th-Percentile Queue Length [ft/ln]	67.42	125.78	125.92		92.88	15.52	94.13	68.83
95th-Percentile Queue Length [veh/ln]	4.85	8.71	8.72		6.69	1.12	6.78	4.96
95th-Percentile Queue Length [ft/ln]	121.36	217.74	217.94		167.18	27.93	169.44	123.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.73	21.72	21.73	0.00	0.00	0.00	0.00	11.04	7.32	0.00	11.11	11.01
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.50			0.00			10.79			11.09		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.685											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.403	1.818	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.325	4.132	2.574	2.743
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2024) WITH PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro
Report File: C:\...\AMOYW.pdf

Scenario 3 Opening Year (2024) With Project AM Peak Hour
8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.006	12.7	B
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.110	9.2	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.545	15.6	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.493	10.1	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.487	5.9	A
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.001	8.5	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.006	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.019	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	3	12	13	3	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	207	228	13	3	22
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	58	64	4	1	6
Total Analysis Volume [veh/h]	61	233	257	15	3	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	7.75	0.00	0.00	0.00	12.71	9.61
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.32	2.32	0.00	0.00	2.60	2.60
d_A, Approach Delay [s/veh]	1.60		0.00		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.27					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.110

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	2	0	43	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	106	172	1	50	146
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	31	50	0	15	43
Total Analysis Volume [veh/h]	0	124	201	1	58	171
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.11	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	10.93	9.21	0.00	0.00	7.60	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.37	0.00	0.00	0.09	0.04
95th-Percentile Queue Length [ft/ln]	0.00	9.29	0.00	0.00	2.14	1.07
d_A, Approach Delay [s/veh]	9.21		0.00		1.94	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.85					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.545

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	43	0	0	3	106	0	0	435	98
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	101	186	27	11	34	1069	8	201	1067	235
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	27	50	7	3	9	288	2	54	288	63
Total Analysis Volume [veh/h]	4	13	109	201	29	12	37	1153	9	217	1151	254
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	14	14	5	34	34	10	39	39
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.07	0.48	0.48	0.14	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.14	0.02	0.02	0.23	0.01	0.12	0.26	0.26
s, saturation flow rate [veh/h]	1391	1800	1530	1300	1713	1619	4631	1445	1619	3427	1639
c, Capacity [veh/h]	320	370	315	322	352	113	2223	694	231	1896	907
d1, Uniform Delay [s]	25.02	22.24	23.65	28.24	22.59	30.97	12.31	9.52	29.37	9.40	9.40
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.04	0.58	1.64	0.13	1.49	0.75	0.03	10.60	0.82	1.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.32	0.58	0.11	0.30	0.48	0.01	0.87	0.46	0.46
d, Delay for Lane Group [s/veh]	25.03	22.28	24.24	29.88	22.73	32.46	13.06	9.55	39.97	10.23	11.12
Lane Group LOS	C	C	C	C	C	C	B	A	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.16	1.41	3.03	0.50	0.54	3.09	0.06	3.64	3.13	3.22
50th-Percentile Queue Length [ft/ln]	1.39	3.88	35.18	75.63	12.51	13.59	77.36	1.42	90.92	78.26	80.49
95th-Percentile Queue Length [veh/ln]	0.10	0.28	2.53	5.45	0.90	0.98	5.57	0.10	6.55	5.63	5.80
95th-Percentile Queue Length [ft/ln]	2.50	6.98	63.32	136.13	22.52	24.46	139.25	2.56	163.66	140.87	144.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.03	22.28	24.24	29.88	22.73	22.73	32.46	13.06	9.55	39.97	10.38	11.12
Movement LOS	C	C	C	C	C	C	C	B	A	D	B	B
d_A, Approach Delay [s/veh]	24.06			28.67			13.63			14.45		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.60											
Intersection LOS	B											
Intersection V/C	0.545											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.59	26.59	26.59	26.59
l_p,int, Pedestrian LOS Score for Intersection	2.206	2.093	3.165	3.511
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	828	828	543	543
d_b, Bicycle Delay [s]	12.02	12.02	18.59	18.59
l_b,int, Bicycle LOS Score for Intersection	1.753	1.929	2.171	2.386
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.493

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	157	0	109	40	0	376	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	320	0	341	0	1159	40	0	1163	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	0	90	0	307	11	0	308	0
Total Analysis Volume [veh/h]	0	0	0	339	0	361	0	1228	42	0	1232	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		16	16	36	36	36	36
g / C, Green / Cycle		0.27	0.27	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate		0.11	0.22	0.24	0.03	0.24	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		815	421	2902	906	2902	906
d1, Uniform Delay [s]		17.73	20.35	6.57	5.15	6.57	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.31	3.89	0.41	0.09	0.41	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.39	0.81	0.40	0.04	0.40	0.00
d, Delay for Lane Group [s/veh]		18.04	24.23	6.98	5.24	6.99	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.69	4.51	1.63	0.15	2.10	0.00
50th-Percentile Queue Length [ft/ln]		42.29	112.67	40.78	3.66	52.51	0.00
95th-Percentile Queue Length [veh/ln]		3.05	7.99	2.94	0.26	3.78	0.00
95th-Percentile Queue Length [ft/ln]		76.13	199.71	73.40	6.59	94.52	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.04	0.00	24.23	0.00	6.98	5.24	0.00	6.99	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			21.23			6.92			6.99		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.08											
Intersection LOS	B											
Intersection V/C	0.493											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.273	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.219	2.199
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.487

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	128	0	0	0	0	0	0	60	49	0	248	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	213	3	43	0	0	0	0	1117	49	0	1396	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	1	11	0	0	0	0	291	13	0	364	125
Total Analysis Volume [veh/h]	222	3	45	0	0	0	0	1164	51	0	1454	500
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		42	42	42	42
g / C, Green / Cycle	0.17	0.17	0.17		0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.12	0.01	0.01		0.23	0.03	0.28	0.31
s, saturation flow rate [veh/h]	1714	1560	1530		4903	1530	4903	1530
c, Capacity [veh/h]	286	260	255		3435	1072	3435	1072
d1, Uniform Delay [s]	23.88	21.23	21.23		3.50	2.79	3.77	3.93
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.97	0.15	0.15		0.25	0.08	0.36	1.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.09	0.09		0.33	0.05	0.41	0.45
d, Delay for Lane Group [s/veh]	27.84	21.37	21.38		3.75	2.87	4.13	5.29
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.00	0.27	0.27		0.66	0.08	0.89	1.24
50th-Percentile Queue Length [ft/ln]	75.04	6.76	6.66		16.38	2.11	22.25	30.98
95th-Percentile Queue Length [veh/ln]	5.40	0.49	0.48		1.18	0.15	1.60	2.23
95th-Percentile Queue Length [ft/ln]	135.07	12.17	11.99		29.49	3.79	40.05	55.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.84	21.37	21.37	0.00	0.00	0.00	0.00	3.75	2.87	0.00	4.13	5.29
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	26.69			0.00			3.71			4.43		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	5.92											
Intersection LOS	A											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.187	1.875	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	1.987	4.132	2.201	2.591
Bicycle LOS	A	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	0	0	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.51	8.31	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.51		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.25					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	1	1	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	0	1	1	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6
Total Analysis Volume [veh/h]	6	0	0	1	1	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.37	7.24	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.45	0.45	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.019

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	0	0	7	23	45
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	0	7	23	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	0	2	6	12
Total Analysis Volume [veh/h]	19	0	0	7	24	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.57	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.43	1.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.71					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro
Report File: C:\...\PMOYW.pdf

Scenario 3 Opening Year (2024) With Project PM Peak Hour
8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.044	19.0	C
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.008	14.5	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.834	30.0	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.686	13.2	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.687	13.0	B
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	WB Thru	0.000	0.0	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.015	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.035	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.044

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	10	7	7	12	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	471	441	7	12	37
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	129	120	2	3	10
Total Analysis Volume [veh/h]	30	515	482	8	13	40
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.04	0.06
d_M, Delay for Movement [s/veh]	8.24	0.00	0.00	0.00	19.01	11.71
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.35	0.35
95th-Percentile Queue Length [ft/ln]	1.14	1.14	0.00	0.00	8.66	8.66
d_A, Approach Delay [s/veh]	0.45		0.00		13.50	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.89					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	49	2	0	68	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	69	301	9	80	351
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	18	80	2	21	94
Total Analysis Volume [veh/h]	3	74	322	10	85	375
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.08	0.00	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	14.48	9.50	0.00	0.00	7.95	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.26	0.00	0.00	0.14	0.07
95th-Percentile Queue Length [ft/ln]	0.59	6.46	0.00	0.00	3.49	1.74
d_A, Approach Delay [s/veh]	9.70		0.00		1.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.64					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.834

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	66	0	2	2	402	0	0	267	47
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	59	251	312	87	18	50	1411	19	307	1423	249
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	65	80	22	5	13	363	5	79	366	64
Total Analysis Volume [veh/h]	33	61	258	321	90	19	51	1452	20	316	1464	256
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	39	48	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	7	34	34	20	47	47
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.08	0.36	0.36	0.21	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.29	0.06	0.03	0.30	0.01	0.19	0.33	0.33
s, saturation flow rate [veh/h]	1309	1800	1530	1086	1747	1619	4631	1445	1619	3427	1667
c, Capacity [veh/h]	392	550	467	361	533	127	1646	514	345	1681	818
d1, Uniform Delay [s]	28.05	23.74	27.47	36.14	24.43	41.72	28.42	20.02	36.36	18.36	18.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.09	0.97	6.67	0.18	2.01	6.39	0.13	8.74	2.14	4.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.11	0.54	0.86	0.20	0.40	0.86	0.04	0.89	0.67	0.67
d, Delay for Lane Group [s/veh]	28.14	23.82	28.43	42.81	24.61	43.72	34.81	20.16	45.09	20.50	22.95
Lane Group LOS	C	C	C	D	C	D	C	C	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.57	0.96	4.77	7.93	1.75	1.13	9.91	0.27	7.28	8.54	8.96
50th-Percentile Queue Length [ft/ln]	14.30	23.91	119.21	198.26	43.85	28.29	247.84	6.84	181.98	213.62	224.01
95th-Percentile Queue Length [veh/ln]	1.03	1.72	8.35	12.55	3.16	2.04	15.08	0.49	11.70	13.34	13.87
95th-Percentile Queue Length [ft/ln]	25.74	43.03	208.74	313.72	78.93	50.92	376.94	12.31	292.60	333.47	346.74

Movement, Approach, & Intersection Results

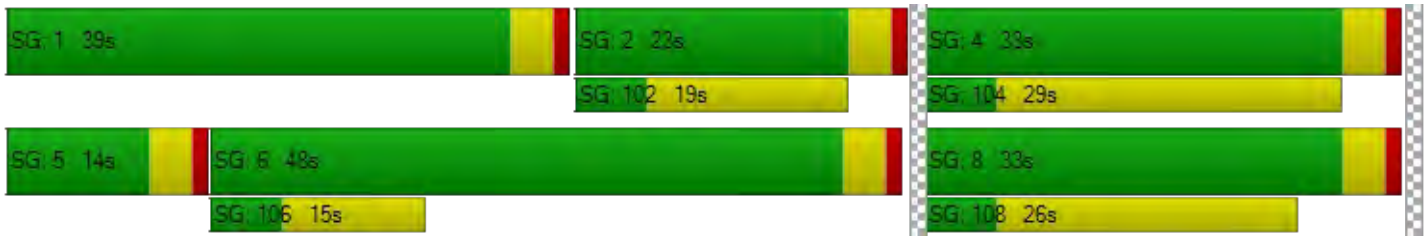
d_M, Delay for Movement [s/veh]	28.14	23.82	28.43	42.81	24.61	24.61	43.72	34.81	20.16	45.09	21.02	22.95
Movement LOS	C	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	27.61			38.23			34.93			25.00		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	30.00											
Intersection LOS	C											
Intersection V/C	0.834											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.96	38.96	38.96	38.96
l_p,int, Pedestrian LOS Score for Intersection	2.319	2.196	3.375	3.960
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	610	610	400	926
d_b, Bicycle Delay [s]	22.96	22.96	30.44	13.72
l_b,int, Bicycle LOS Score for Intersection	2.124	2.248	2.374	2.648
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.686

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	90	0	360	108	0	224	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	461	0	455	0	1683	108	0	1528	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	118	0	116	0	429	28	0	390	0
Total Analysis Volume [veh/h]	0	0	0	470	0	464	0	1717	110	0	1559	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	31	31	31	31
g / C, Green / Cycle		0.35	0.35	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.16	0.30	0.34	0.07	0.31	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		1042	539	2525	788	2525	788
d1, Uniform Delay [s]		14.95	17.96	10.77	7.61	10.27	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.30	3.88	1.42	0.36	1.09	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.44	0.84	0.67	0.14	0.61	0.00
d, Delay for Lane Group [s/veh]		15.24	21.84	12.19	7.97	11.36	0.00
Lane Group LOS		B	C	B	A	B	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.21	5.72	4.00	0.58	4.10	0.00
50th-Percentile Queue Length [ft/ln]		55.23	142.97	99.96	14.45	102.57	0.00
95th-Percentile Queue Length [veh/ln]		3.98	9.64	7.20	1.04	7.39	0.00
95th-Percentile Queue Length [ft/ln]		99.42	241.01	179.92	26.01	184.63	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.24	0.00	21.84	0.00	12.19	7.97	0.00	11.36	0.00
Movement LOS				B		C		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			18.52			11.93			11.36		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.15											
Intersection LOS	B											
Intersection V/C	0.686											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.70	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.335	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1099	633	633
d_b, Bicycle Delay [s]	30.03	6.09	14.03	14.03
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.545	2.400
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.687

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	74	0	0	0	0	0	0	225	135	0	150	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	272	4	803	0	0	0	0	1731	135	0	1741	420
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	1	206	0	0	0	0	445	35	0	447	108
Total Analysis Volume [veh/h]	280	4	825	0	0	0	0	1779	139	0	1789	432
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		33	33	33	33
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26		0.35	0.09	0.36	0.27
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	561	501	500		2648	826	2648	826
d1, Uniform Delay [s]	16.20	18.50	18.51		9.84	6.98	9.87	8.78
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	3.18	3.21		1.28	0.43	1.30	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.81	0.81		0.65	0.16	0.66	0.51
d, Delay for Lane Group [s/veh]	16.85	21.68	21.72		11.12	7.41	11.18	11.02
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.81	5.03	5.03		3.77	0.67	3.80	2.76
50th-Percentile Queue Length [ft/ln]	70.18	125.65	125.80		94.17	16.77	95.08	68.92
95th-Percentile Queue Length [veh/ln]	5.05	8.70	8.71		6.78	1.21	6.85	4.96
95th-Percentile Queue Length [ft/ln]	126.33	217.57	217.77		169.51	30.19	171.14	124.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.85	21.68	21.70	0.00	0.00	0.00	0.00	11.12	7.41	0.00	11.18	11.02
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.48			0.00			10.86			11.15		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.01											
Intersection LOS	B											
Intersection V/C	0.687											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.408	1.818	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.340	4.132	2.586	2.748
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	1	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	0	0	0	1	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	0	0	3
Total Analysis Volume [veh/h]	16	0	0	0	1	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.38	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.12	1.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.035

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	16	12	21
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	0	16	13	21
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	4	3	6
Total Analysis Volume [veh/h]	36	0	0	17	14	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.53	7.26	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.70	2.70	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	A					

GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 4 General Plan Buildout Without Project AM Peak Hour

Report File: C:\...\AM40WO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.006	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.052	9.0	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.715	24.9	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.446	8.8	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.546	8.1	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	240	620	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	240	620	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	63	163	0	0	0
Total Analysis Volume [veh/h]	0	253	653	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	0.00	0.00	0.00	15.94	12.32
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		14.13	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.052

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	49	179	17	403	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	49	179	17	403	154
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	47	4	106	41
Total Analysis Volume [veh/h]	0	52	188	18	424	162
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.00	0.00	0.29	0.00
d_M, Delay for Movement [s/veh]	28.58	9.02	0.00	0.00	8.17	0.00
Movement LOS	D	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.00	0.00	0.86	0.43
95th-Percentile Queue Length [ft/ln]	0.00	4.10	0.00	0.00	21.61	10.80
d_A, Approach Delay [s/veh]	9.02		0.00		5.91	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.66					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.715

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	115	19	16	19	268	2	56	241	85
Total Analysis Volume [veh/h]	5	24	113	459	77	63	78	1073	9	223	964	340
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	24	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	27	27	12	31	31
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.10	0.34	0.34	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.34	0.08	0.04	0.20	0.01	0.12	0.23	0.23
s, saturation flow rate [veh/h]	1277	1900	1615	1280	1760	1714	5176	1615	1714	3618	1657
c, Capacity [veh/h]	456	689	585	515	638	175	1754	547	255	1396	639
d1, Uniform Delay [s]	20.45	16.49	17.45	27.11	17.63	33.78	21.81	17.61	33.12	19.76	19.76
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.02	0.15	4.12	0.16	1.63	1.42	0.05	7.27	2.00	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.18	0.85	0.21	0.42	0.58	0.02	0.83	0.61	0.61
d, Delay for Lane Group [s/veh]	20.46	16.51	17.60	31.24	17.79	35.40	23.23	17.67	40.40	21.76	24.11
Lane Group LOS	C	B	B	C	B	D	C	B	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.27	1.32	8.51	1.65	1.33	4.84	0.11	4.18	5.86	5.79
50th-Percentile Queue Length [ft/ln]	1.66	6.67	32.97	212.71	41.35	33.29	121.03	2.68	104.54	146.58	144.75
95th-Percentile Queue Length [veh/ln]	0.12	0.48	2.37	13.29	2.98	2.40	8.45	0.19	7.53	9.83	9.74
95th-Percentile Queue Length [ft/ln]	2.98	12.00	59.34	332.30	74.42	59.92	211.24	4.82	188.18	245.86	243.41

Movement, Approach, & Intersection Results

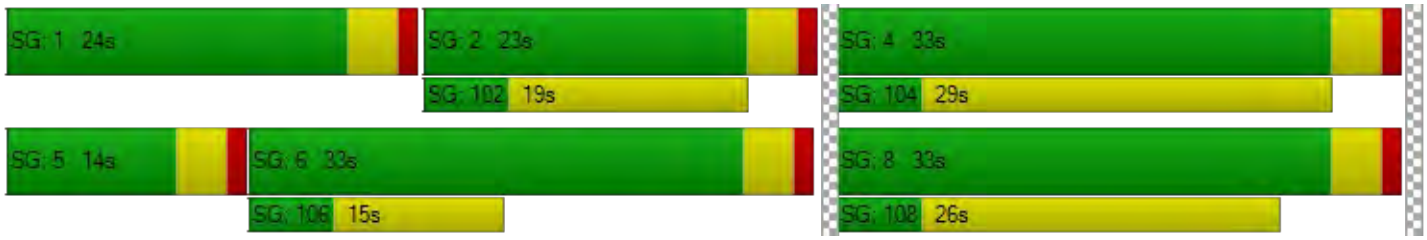
d_M, Delay for Movement [s/veh]	20.46	16.51	17.60	31.24	17.79	17.79	35.40	23.23	17.67	40.40	21.93	24.11
Movement LOS	C	B	B	C	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	17.52			28.09			24.00			25.11		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.94											
Intersection LOS	C											
Intersection V/C	0.715											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.55	31.55	31.55	31.55
l_p,int, Pedestrian LOS Score for Intersection	2.231	2.257	3.151	3.909
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	724	724	475	724
d_b, Bicycle Delay [s]	16.29	16.29	23.29	16.29
l_b,int, Bicycle LOS Score for Intersection	1.782	2.498	2.166	2.358
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.446

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	339	0	274	0	1152	168	0	1276	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	339	0	274	0	1152	0	0	1276	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	72	0	303	0	0	336	0
Total Analysis Volume [veh/h]	0	0	0	357	0	288	0	1213	0	0	1343	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		13	13	39	39	39	39
g / C, Green / Cycle		0.22	0.22	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.10	0.17	0.22	0.00	0.25	0.00
s, saturation flow rate [veh/h]		3329	1615	5176	1615	5176	1615
c, Capacity [veh/h]		745	361	3330	1039	3330	1039
d1, Uniform Delay [s]		20.20	21.85	4.92	0.00	5.08	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.44	3.35	0.29	0.00	0.34	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.46	0.76	0.35	0.00	0.38	0.00
d, Delay for Lane Group [s/veh]		20.63	25.20	5.21	0.00	5.42	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.95	3.67	1.15	0.00	1.83	0.00
50th-Percentile Queue Length [ft/ln]		48.76	91.70	28.68	0.00	45.67	0.00
95th-Percentile Queue Length [veh/ln]		3.51	6.60	2.07	0.00	3.29	0.00
95th-Percentile Queue Length [ft/ln]		87.77	165.06	51.63	0.00	82.21	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.63	0.00	25.20	0.00	5.21	0.00	0.00	5.42	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			22.67			5.21			5.42		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	8.82											
Intersection LOS	A											
Intersection V/C	0.446											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.261	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.193	2.261
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.546

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	137	4	452	0	0	0	0	1189	333	0	1583	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	4	452	0	0	0	0	1189	0	0	1583	566
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	1	119	0	0	0	0	313	0	0	417	149
Total Analysis Volume [veh/h]	144	4	476	0	0	0	0	1252	0	0	1666	596
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12		40	40	40	40
g / C, Green / Cycle	0.19	0.19	0.19		0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.08	0.14	0.14		0.23	0.00	0.31	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	333	315	314		3482	1086	3482	1086
d1, Uniform Delay [s]	21.23	22.74	22.74		4.19	0.00	4.64	4.96
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	3.24	3.25		0.27	0.00	0.43	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.73	0.73		0.34	0.00	0.45	0.52
d, Delay for Lane Group [s/veh]	22.05	25.99	26.00		4.45	0.00	5.07	6.76
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.65	3.10	3.09		0.94	0.00	1.40	1.98
50th-Percentile Queue Length [ft/ln]	41.29	77.42	77.24		23.44	0.00	34.91	49.61
95th-Percentile Queue Length [veh/ln]	2.97	5.57	5.56		1.69	0.00	2.51	3.57
95th-Percentile Queue Length [ft/ln]	74.32	139.35	139.04		42.20	0.00	62.85	89.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.05	25.99	25.99	0.00	0.00	0.00	0.00	4.45	0.00	0.00	5.07	6.76
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	25.08			0.00			4.45			5.52		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	8.15											
Intersection LOS	A											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.256	1.960	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	2.538	4.132	2.214	2.742
Bicycle LOS	B	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 4 General Plan Buildout Without Project PM Peak Hour

Report File: C:\...\PM40WO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.4	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.050	15.5	C
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	1.036	160.2	F
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.668	12.2	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.729	13.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	810	500	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	810	500	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	213	132	0	0	0
Total Analysis Volume [veh/h]	1	853	526	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.35	0.00	0.00	0.00	25.41	11.26
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.01		0.00		18.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.050

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	352	328	21	79	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	352	328	21	79	369
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	93	86	6	21	97
Total Analysis Volume [veh/h]	19	371	345	22	83	388
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.42	0.00	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	15.51	12.29	0.00	0.00	8.04	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	2.12	0.00	0.00	0.14	0.07
95th-Percentile Queue Length [ft/ln]	3.94	53.10	0.00	0.00	3.44	1.72
d_A, Approach Delay [s/veh]	12.45		0.00		1.42	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.49					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	160.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.036

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	145	37	8	38	335	5	86	322	141
Total Analysis Volume [veh/h]	36	127	279	580	146	34	151	1341	21	342	1286	564
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	57	0	0	57	0	14	29	0	24	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	53	53	53	53	53	10	25	25	20	35	35
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.09	0.23	0.23	0.18	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.16	0.54	0.09	0.08	0.25	0.01	0.19	0.33	0.34
s, saturation flow rate [veh/h]	1233	1900	1615	1013	1839	1714	5176	1615	1714	3618	1623
c, Capacity [veh/h]	572	914	777	501	885	157	1178	368	313	1151	517
d1, Uniform Delay [s]	19.66	15.85	17.75	34.55	16.36	49.63	42.59	33.31	45.09	37.60	37.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.06	0.26	189.69	0.11	21.87	164.68	0.28	95.96	108.70	172.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.13	0.34	1.10	0.19	0.91	1.08	0.05	1.04	1.05	1.07
d, Delay for Lane Group [s/veh]	19.71	15.91	18.01	224.24	16.46	71.50	207.27	33.59	141.05	146.29	209.76
Lane Group LOS	B	B	B	F	B	E	F	C	F	F	F
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.54	1.69	4.17	40.24	2.47	4.70	28.05	0.43	16.45	31.79	37.63
50th-Percentile Queue Length [ft/ln]	13.39	42.34	104.26	1006.07	61.82	117.52	701.29	10.77	411.17	794.66	940.75
95th-Percentile Queue Length [veh/ln]	0.96	3.05	7.51	54.55	4.45	8.26	38.49	0.78	23.58	42.31	50.08
95th-Percentile Queue Length [ft/ln]	24.11	76.21	187.66	1363.75	111.27	206.41	962.13	19.38	589.57	1057.71	1252.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.71	15.91	18.01	224.24	16.46	16.46	71.50	207.27	33.59	141.05	147.26	209.76
Movement LOS	B	B	B	F	B	B	E	F	C	F	F	F
d_A, Approach Delay [s/veh]	17.54			175.03			191.34			162.38		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	160.22											
Intersection LOS	F											
Intersection V/C	1.036											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.44	46.44	46.44	46.44
l_p,int, Pedestrian LOS Score for Intersection	2.363	2.446	3.339	4.358
Crosswalk LOS	B	B	C	E
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	962	962	454	636
d_b, Bicycle Delay [s]	14.82	14.82	32.91	25.63
l_b,int, Bicycle LOS Score for Intersection	2.253	2.751	2.350	2.705
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.668

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	496	0	423	0	1874	196	0	1378	460
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	496	0	423	0	1874	0	0	1378	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	131	0	111	0	493	0	0	363	0
Total Analysis Volume [veh/h]	0	0	0	522	0	445	0	1973	0	0	1451	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		19	19	33	33	33	33
g / C, Green / Cycle		0.32	0.32	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate		0.16	0.26	0.36	0.00	0.27	0.00
s, saturation flow rate [veh/h]		3144	1615	5176	1615	5176	1615
c, Capacity [veh/h]		1010	519	2825	882	2825	882
d1, Uniform Delay [s]		16.46	18.79	9.73	0.00	8.46	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.37	3.28	1.25	0.00	0.61	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.49	0.82	0.66	0.00	0.49	0.00
d, Delay for Lane Group [s/veh]		16.84	22.06	10.98	0.00	9.07	0.00
Lane Group LOS		B	C	B	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.54	5.32	4.02	0.00	3.09	0.00
50th-Percentile Queue Length [ft/ln]		63.62	133.10	100.59	0.00	77.25	0.00
95th-Percentile Queue Length [veh/ln]		4.58	9.11	7.24	0.00	5.56	0.00
95th-Percentile Queue Length [ft/ln]		114.52	227.71	181.06	0.00	139.05	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.84	0.00	22.06	0.00	10.98	0.00	0.00	9.07	0.00
Movement LOS				B		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			19.24			10.98			9.07		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.17											
Intersection LOS	B											
Intersection V/C	0.668											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.336	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.590	2.318
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.729

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	245	7	849	0	0	0	0	2024	248	0	1682	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	7	849	0	0	0	0	2024	0	0	1682	573
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	2	223	0	0	0	0	533	0	0	443	151
Total Analysis Volume [veh/h]	258	7	894	0	0	0	0	2131	0	0	1771	603
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		32	32	32	32
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.26	0.27		0.39	0.00	0.32	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	564	533	531		2785	869	2785	869
d1, Uniform Delay [s]	15.81	18.42	18.43		10.55	0.00	9.52	9.96
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	2.96	3.00		1.71	0.00	0.98	3.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.80	0.81		0.73	0.00	0.60	0.66
d, Delay for Lane Group [s/veh]	16.34	21.38	21.44		12.26	0.00	10.50	13.94
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.47	5.29	5.30		4.77	0.00	3.50	4.43
50th-Percentile Queue Length [ft/ln]	61.64	132.18	132.42		119.21	0.00	87.44	110.75
95th-Percentile Queue Length [veh/ln]	4.44	9.06	9.07		8.35	0.00	6.30	7.88
95th-Percentile Queue Length [ft/ln]	110.95	226.45	226.78		208.75	0.00	157.39	197.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.34	21.38	21.41	0.00	0.00	0.00	0.00	12.26	0.00	0.00	10.50	13.94
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.28			0.00			12.26			11.38		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.53											
Intersection LOS	B											
Intersection V/C	0.729											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.380	1.970	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.376	4.132	2.673	2.800
Bicycle LOS	C	D	B	C

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



GENERAL PLAN BUILDOUT (2040) WITH PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 5 General Plan Buildout With Project AM Peak Hour

Report File: C:\...\AM40W.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.011	19.2	C
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.108	9.3	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.733	25.6	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.463	9.0	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.546	8.2	A
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.001	8.5	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.006	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.019	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.011

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	240	620	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	0	0	13	3	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	240	620	13	3	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	63	163	3	1	6
Total Analysis Volume [veh/h]	57	253	653	14	3	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.01	0.00	0.01	0.05
d_M, Delay for Movement [s/veh]	8.81	0.00	0.00	0.00	19.17	12.87
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	2.32	2.32	0.00	0.00	4.49	4.49
d_A, Approach Delay [s/veh]	1.62		0.00		13.63	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.86					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.108

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	49	179	17	403	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	53	1	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	102	180	17	425	154
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	27	47	4	112	41
Total Analysis Volume [veh/h]	0	107	189	18	447	162
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.11	0.00	0.00	0.31	0.00
d_M, Delay for Movement [s/veh]	30.83	9.27	0.00	0.00	8.21	0.00
Movement LOS	D	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.36	0.00	0.00	0.93	0.46
95th-Percentile Queue Length [ft/ln]	0.00	9.07	0.00	0.00	23.15	11.58
d_A, Approach Delay [s/veh]	9.27		0.00		6.03	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.05					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.733

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	22	0	0	2	0	0	0	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	458	73	60	76	1019	9	212	916	374
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	121	19	16	20	268	2	56	241	98
Total Analysis Volume [veh/h]	5	24	113	482	77	63	80	1073	9	223	964	394
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	24	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	27	27	12	31	31
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.10	0.34	0.34	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.36	0.08	0.04	0.20	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1277	1900	1615	1280	1760	1714	5176	1615	1714	3618	1631
c, Capacity [veh/h]	456	689	585	515	638	177	1754	547	255	1392	628
d1, Uniform Delay [s]	20.45	16.49	17.45	27.74	17.63	33.74	21.81	17.61	33.12	20.11	20.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.02	0.15	5.93	0.16	1.66	1.42	0.05	7.27	2.28	5.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.18	0.89	0.21	0.43	0.58	0.02	0.83	0.64	0.64
d, Delay for Lane Group [s/veh]	20.46	16.51	17.60	33.66	17.79	35.40	23.23	17.67	40.40	22.39	25.14
Lane Group LOS	C	B	B	C	B	D	C	B	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.27	1.32	9.39	1.65	1.37	4.84	0.11	4.18	6.27	6.13
50th-Percentile Queue Length [ft/ln]	1.66	6.67	32.97	234.70	41.35	34.18	121.03	2.68	104.54	156.63	153.29
95th-Percentile Queue Length [veh/ln]	0.12	0.48	2.37	14.41	2.98	2.46	8.45	0.19	7.53	10.37	10.19
95th-Percentile Queue Length [ft/ln]	2.98	12.00	59.34	360.33	74.42	61.53	211.24	4.82	188.18	259.25	254.81

Movement, Approach, & Intersection Results

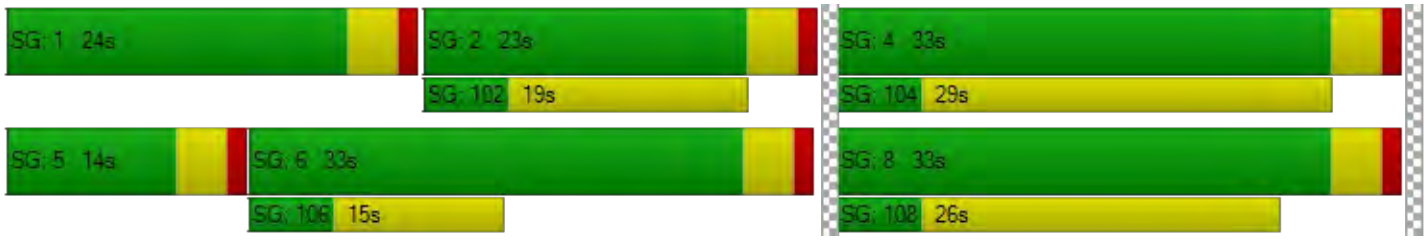
d_M, Delay for Movement [s/veh]	20.46	16.51	17.60	33.66	17.79	17.79	35.40	23.23	17.67	40.40	22.47	25.14
Movement LOS	C	B	B	C	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	17.52			30.09			24.02			25.66		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	25.57											
Intersection LOS	C											
Intersection V/C	0.733											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.55	31.55	31.55	31.55
l_p,int, Pedestrian LOS Score for Intersection	2.231	2.282	3.152	3.958
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	724	724	475	724
d_b, Bicycle Delay [s]	16.29	16.29	23.29	16.29
l_b,int, Bicycle LOS Score for Intersection	1.782	2.535	2.167	2.386
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.463

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	339	0	274	0	1152	168	0	1276	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	15	0	13	9	0	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	339	0	289	0	1165	9	0	1312	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	76	0	307	2	0	345	0
Total Analysis Volume [veh/h]	0	0	0	357	0	304	0	1226	9	0	1381	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		14	14	38	38	38	38
g / C, Green / Cycle		0.23	0.23	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.10	0.18	0.23	0.01	0.25	0.00
s, saturation flow rate [veh/h]		3329	1615	5176	1615	5176	1615
c, Capacity [veh/h]		776	376	3282	1024	3282	1024
d1, Uniform Delay [s]		19.72	21.57	5.20	4.05	5.40	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.39	3.40	0.30	0.02	0.37	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.44	0.77	0.35	0.01	0.40	0.00
d, Delay for Lane Group [s/veh]		20.11	24.96	5.50	4.07	5.76	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.92	3.85	1.24	0.03	1.99	0.00
50th-Percentile Queue Length [ft/ln]		47.95	96.35	31.10	0.63	49.76	0.00
95th-Percentile Queue Length [veh/ln]		3.45	6.94	2.24	0.05	3.58	0.00
95th-Percentile Queue Length [ft/ln]		86.31	173.43	55.98	1.14	89.56	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.11	0.00	24.96	0.00	5.50	4.07	0.00	5.76	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			22.34			5.49			5.76		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.00											
Intersection LOS	A											
Intersection V/C	0.463											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.265	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.205	2.281
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.546

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	137	4	452	0	0	0	0	1189	333	0	1583	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	0	0	0	0	0	0	4	9	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	157	4	452	0	0	0	0	1193	9	0	1599	566
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	1	119	0	0	0	0	314	2	0	421	149
Total Analysis Volume [veh/h]	165	4	476	0	0	0	0	1256	9	0	1683	596
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12		40	40	40	40
g / C, Green / Cycle	0.19	0.19	0.19		0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.09	0.14	0.14		0.23	0.01	0.31	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	334	316	315		3478	1085	3478	1085
d1, Uniform Delay [s]	21.47	22.70	22.70		4.21	3.26	4.69	4.99
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.03	3.19	3.20		0.27	0.01	0.44	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.72	0.72		0.34	0.01	0.46	0.52
d, Delay for Lane Group [s/veh]	22.50	25.89	25.90		4.48	3.27	5.13	6.79
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.92	3.09	3.08		0.95	0.02	1.43	2.00
50th-Percentile Queue Length [ft/ln]	48.07	77.24	77.07		23.71	0.48	35.68	49.90
95th-Percentile Queue Length [veh/ln]	3.46	5.56	5.55		1.71	0.03	2.57	3.59
95th-Percentile Queue Length [ft/ln]	86.53	139.03	138.73		42.67	0.87	64.22	89.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.50	25.89	25.90	0.00	0.00	0.00	0.00	4.48	3.27	0.00	5.13	6.79
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	25.02			0.00			4.47			5.56		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	8.23											
Intersection LOS	A											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.263	1.960	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	2.571	4.132	2.221	2.750
Bicycle LOS	B	D	B	C

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	0	0	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.51	8.31	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.51		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.25					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	1	1	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	0	1	1	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6
Total Analysis Volume [veh/h]	6	0	0	1	1	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.37	7.24	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.45	0.45	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.019

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	0	0	7	23	45
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	0	7	23	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	0	2	6	12
Total Analysis Volume [veh/h]	19	0	0	7	24	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.57	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.43	1.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.71					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 5 General Plan Buildout With Project PM Peak Hour

Report File: C:\...\PM40W.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.077	29.8	D
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.058	17.2	C
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	1.063	189.5	F
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.677	12.3	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.732	13.6	B
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	WB Thru	0.000	0.0	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.015	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.035	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	29.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.077

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	810	500	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	0	0	7	12	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	810	500	7	12	37
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	213	132	2	3	10
Total Analysis Volume [veh/h]	28	853	526	7	13	39
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.08	0.06
d_M, Delay for Movement [s/veh]	8.40	0.00	0.00	0.00	29.79	13.00
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	1.14	1.14	0.00	0.00	12.33	12.33
d_A, Approach Delay [s/veh]	0.27		0.00		17.12	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.058

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	352	328	21	79	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	1	0	36	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	377	329	21	115	370
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	99	87	6	30	97
Total Analysis Volume [veh/h]	19	397	346	22	121	389
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.45	0.00	0.00	0.09	0.00
d_M, Delay for Movement [s/veh]	17.23	12.69	0.00	0.00	8.09	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	2.40	0.00	0.00	0.20	0.10
95th-Percentile Queue Length [ft/ln]	4.58	59.90	0.00	0.00	5.12	2.56
d_A, Approach Delay [s/veh]	12.90		0.00		1.92	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.90					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	189.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.063

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	35	0	1	1	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	586	139	33	144	1274	20	325	1222	560
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	154	37	9	38	335	5	86	322	147
Total Analysis Volume [veh/h]	36	127	279	617	146	35	152	1341	21	342	1286	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	70	0	0	70	0	14	33	0	27	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	66	66	66	66	66	10	29	29	23	42	42
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.08	0.22	0.22	0.18	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.16	0.58	0.09	0.08	0.25	0.01	0.19	0.34	0.35
s, saturation flow rate [veh/h]	1232	1900	1615	1013	1838	1714	5176	1615	1714	3618	1616
c, Capacity [veh/h]	599	964	819	521	932	133	1156	361	304	1169	522
d1, Uniform Delay [s]	20.89	16.90	18.93	38.39	17.46	60.07	50.58	39.78	53.58	44.09	44.09
k, delay calibration	0.11	0.11	0.11	0.16	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.06	0.23	235.47	0.09	178.64	199.04	0.29	141.41	106.66	174.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.13	0.32	1.13	0.18	1.08	1.10	0.06	1.07	1.04	1.08
d, Delay for Lane Group [s/veh]	20.93	16.96	19.15	273.86	17.55	238.71	249.63	40.07	194.99	150.75	218.87
Lane Group LOS	C	B	B	F	B	F	F	D	F	F	F
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	1.94	4.78	51.38	2.86	10.87	33.36	0.52	21.54	35.16	41.29
50th-Percentile Queue Length [ft/ln]	15.28	48.60	119.55	1284.47	71.40	271.85	833.96	13.03	538.38	879.11	1032.17
95th-Percentile Queue Length [veh/ln]	1.10	3.50	8.37	69.29	5.14	16.76	45.37	0.94	30.20	46.27	54.53
95th-Percentile Queue Length [ft/ln]	27.51	87.47	209.21	1732.26	128.52	418.92	1134.13	23.45	755.09	1156.83	1363.24

Movement, Approach, & Intersection Results

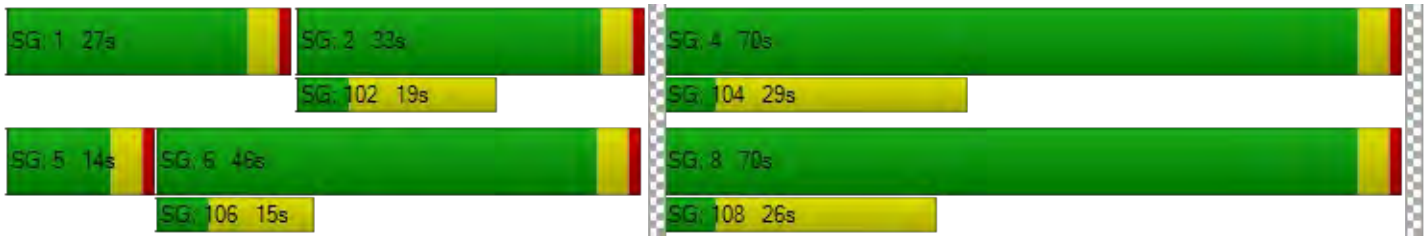
d_M, Delay for Movement [s/veh]	20.93	16.96	19.15	273.86	17.55	17.55	238.71	249.63	40.07	194.99	150.84	218.87
Movement LOS	C	B	B	F	B	B	F	F	D	F	F	F
d_A, Approach Delay [s/veh]	18.66			215.70			245.62			175.73		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	189.46											
Intersection LOS	F											
Intersection V/C	1.063											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.38	56.38	56.38	56.38
l_p,int, Pedestrian LOS Score for Intersection	2.370	2.474	3.347	4.429
Crosswalk LOS	B	B	C	E
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1014	1014	446	645
d_b, Bicycle Delay [s]	15.80	15.80	39.30	29.84
l_b,int, Bicycle LOS Score for Intersection	2.253	2.810	2.351	2.718
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.677

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	496	0	423	0	1874	196	0	1378	460
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	6	0	22	13	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	496	0	429	0	1896	13	0	1396	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	131	0	113	0	499	3	0	367	0
Total Analysis Volume [veh/h]	0	0	0	522	0	452	0	1996	14	0	1469	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		19	19	33	33	33	33
g / C, Green / Cycle		0.32	0.32	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate		0.16	0.27	0.37	0.01	0.27	0.00
s, saturation flow rate [veh/h]		3144	1615	5176	1615	5176	1615
c, Capacity [veh/h]		1021	525	2807	876	2807	876
d1, Uniform Delay [s]		16.29	18.68	9.95	6.36	8.64	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.36	3.29	1.33	0.03	0.63	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.49	0.82	0.68	0.01	0.50	0.00
d, Delay for Lane Group [s/veh]		16.65	21.98	11.28	6.39	9.27	0.00
Lane Group LOS		B	C	B	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.53	5.39	4.17	0.06	3.19	0.00
50th-Percentile Queue Length [ft/ln]		63.15	134.76	104.25	1.44	79.67	0.00
95th-Percentile Queue Length [veh/ln]		4.55	9.20	7.51	0.10	5.74	0.00
95th-Percentile Queue Length [ft/ln]		113.68	229.96	187.66	2.60	143.41	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.65	0.00	21.98	0.00	11.28	6.39	0.00	9.27	0.00
Movement LOS				B		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			19.12			11.25			9.27		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.32											
Intersection LOS	B											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.337	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.610	2.327
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.732

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	245	7	849	0	0	0	0	2024	248	0	1682	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	0	0	0	0	0	13	9	0	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	7	849	0	0	0	0	2037	9	0	1691	573
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	2	223	0	0	0	0	536	2	0	445	151
Total Analysis Volume [veh/h]	267	7	894	0	0	0	0	2144	9	0	1780	603
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		32	32	32	32
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.15	0.26	0.27		0.39	0.01	0.33	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	565	533	532		2783	868	2783	868
d1, Uniform Delay [s]	15.89	18.40	18.42		10.61	6.47	9.55	9.97
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	2.94	2.98		1.76	0.02	1.00	3.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.80	0.80		0.73	0.01	0.61	0.66
d, Delay for Lane Group [s/veh]	16.45	21.34	21.40		12.37	6.49	10.55	13.96
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.57	5.28	5.29		4.83	0.04	3.53	4.44
50th-Percentile Queue Length [ft/ln]	64.30	132.05	132.29		120.79	1.02	88.28	110.91
95th-Percentile Queue Length [veh/ln]	4.63	9.05	9.06		8.44	0.07	6.36	7.89
95th-Percentile Queue Length [ft/ln]	115.74	226.28	226.61		210.91	1.83	158.91	197.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.45	21.34	21.37	0.00	0.00	0.00	0.00	12.37	6.49	0.00	10.55	13.96
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.25			0.00			12.34			11.42		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.57											
Intersection LOS	B											
Intersection V/C	0.732											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.385	1.970	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.391	4.132	2.685	2.805
Bicycle LOS	C	D	B	C

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	1	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	0	0	0	1	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	0	0	3
Total Analysis Volume [veh/h]	16	0	0	0	1	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.38	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.12	1.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.035

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	16	12	21
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	0	16	13	21
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	4	3	6
Total Analysis Volume [veh/h]	36	0	0	17	14	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.53	7.26	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.70	2.70	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

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Scenario 6 General Plan Buildout With Project AM Peak Hour - With Improvements

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8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.584	26.4	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.584

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	22	0	0	2	0	0	0	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	458	73	60	76	1019	9	212	916	374
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	121	19	16	20	268	2	56	241	98
Total Analysis Volume [veh/h]	5	24	113	482	77	63	80	1073	9	223	964	394
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	30	0	19	35	0	14	23	0	18	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	10	10	15	23	9	37	37	13	41	41
g / C, Green / Cycle	0.01	0.11	0.11	0.17	0.26	0.10	0.41	0.41	0.14	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.15	0.08	0.04	0.20	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1714	1900	1615	3144	1760	1714	5176	1615	1714	3618	1631
c, Capacity [veh/h]	24	204	173	522	456	164	2097	654	248	1643	741
d1, Uniform Delay [s]	43.98	36.40	38.52	36.73	26.79	38.62	19.88	16.05	37.68	17.83	17.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.25	0.24	3.63	5.22	0.35	2.05	0.81	0.04	9.02	1.29	2.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.11	0.62	0.88	0.29	0.46	0.49	0.01	0.86	0.54	0.54
d, Delay for Lane Group [s/veh]	48.23	36.65	42.14	41.95	27.14	40.67	20.69	16.09	46.70	19.12	20.68
Lane Group LOS	D	D	D	D	C	D	C	B	D	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.14	0.47	2.41	5.20	2.30	1.59	4.84	0.11	4.89	6.10	5.83
50th-Percentile Queue Length [ft/ln]	3.44	11.68	60.13	130.09	57.45	39.83	121.01	2.68	122.19	152.51	145.64
95th-Percentile Queue Length [veh/ln]	0.25	0.84	4.33	8.94	4.14	2.87	8.45	0.19	8.51	10.15	9.78
95th-Percentile Queue Length [ft/ln]	6.20	21.02	108.23	223.62	103.41	71.69	211.21	4.82	212.83	253.78	244.60

Movement, Approach, & Intersection Results

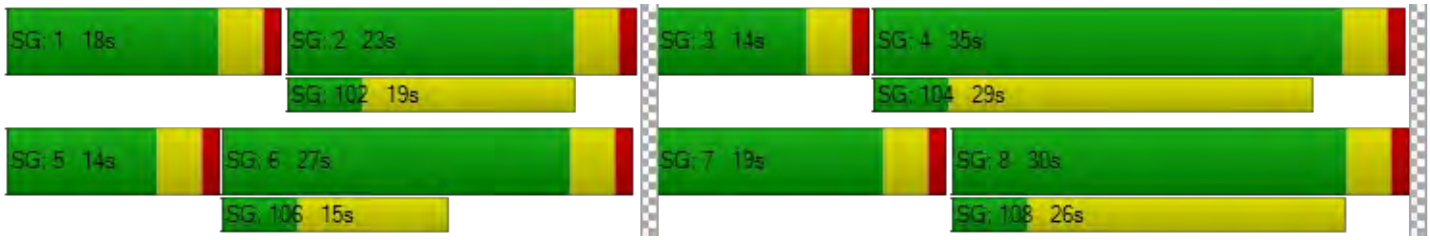
d_M, Delay for Movement [s/veh]	48.23	36.65	42.14	41.95	27.14	27.14	40.67	20.69	16.09	46.70	19.16	20.68
Movement LOS	D	D	D	D	C	C	D	C	B	D	B	C
d_A, Approach Delay [s/veh]	41.43			38.61			22.03			23.43		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	26.39											
Intersection LOS	C											
Intersection V/C	0.584											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.50	36.50	36.50	36.50
l_p,int, Pedestrian LOS Score for Intersection	2.237	2.392	3.151	3.312
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	577	688	422	510
d_b, Bicycle Delay [s]	22.81	19.39	28.06	24.99
l_b,int, Bicycle LOS Score for Intersection	1.782	2.535	2.167	2.386
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 6 General Plan Buildout With Project PM Peak Hour - With Improvements

Report File: C:\...\PM40WI.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	0.848	50.1	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	50.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.848

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	35	0	1	1	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	586	139	33	144	1274	20	325	1222	560
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	154	37	9	38	335	5	86	322	147
Total Analysis Volume [veh/h]	36	127	279	617	146	35	152	1341	21	342	1286	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	30	130	0	30	130	0	130	130	0	130	130	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	30	0	25	41	0	15	29	0	26	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	20	20	21	35	11	31	31	22	42	42
g / C, Green / Cycle	0.06	0.18	0.18	0.19	0.32	0.10	0.28	0.28	0.20	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.16	0.19	0.10	0.08	0.25	0.01	0.19	0.34	0.35
s, saturation flow rate [veh/h]	1714	1900	1615	3144	1741	1714	5176	1615	1714	3618	1616
c, Capacity [veh/h]	101	351	298	600	551	172	1445	451	343	1372	613
d1, Uniform Delay [s]	49.74	39.10	43.80	44.34	28.58	48.69	37.96	28.98	43.48	32.04	32.54
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	0.58	9.88	19.12	0.32	11.32	8.91	0.19	17.17	10.07	27.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.34	0.89	0.98	0.31	0.84	0.88	0.04	0.95	0.89	0.92
d, Delay for Lane Group [s/veh]	51.67	39.68	53.68	63.46	28.90	60.00	46.88	29.16	60.64	42.11	59.88
Lane Group LOS	D	D	D	E	C	E	D	C	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.95	2.91	7.81	9.46	3.49	4.27	11.47	0.39	9.92	15.89	17.71
50th-Percentile Queue Length [ft/ln]	23.81	72.69	195.30	236.60	87.25	106.76	286.67	9.81	248.11	397.28	442.86
95th-Percentile Queue Length [veh/ln]	1.71	5.23	12.40	14.51	6.28	7.66	17.02	0.71	15.09	22.43	24.62
95th-Percentile Queue Length [ft/ln]	42.86	130.84	309.90	362.73	157.05	191.49	425.50	17.66	377.27	560.73	615.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.67	39.68	53.68	63.46	28.90	28.90	60.00	46.88	29.16	60.64	42.13	59.88
Movement LOS	D	D	D	E	C	C	E	D	C	E	D	E
d_A, Approach Delay [s/veh]	49.48			55.62			47.95			49.70		
Approach LOS	D			E			D			D		
d_I, Intersection Delay [s/veh]	50.10											
Intersection LOS	D											
Intersection V/C	0.848											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.41	46.41	46.41	46.41
l_p,int, Pedestrian LOS Score for Intersection	2.363	2.528	3.291	3.588
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	472	672	454	654
d_b, Bicycle Delay [s]	32.11	24.26	32.88	24.93
l_b,int, Bicycle LOS Score for Intersection	2.253	2.810	2.351	2.718
Bicycle LOS	B	C	B	B

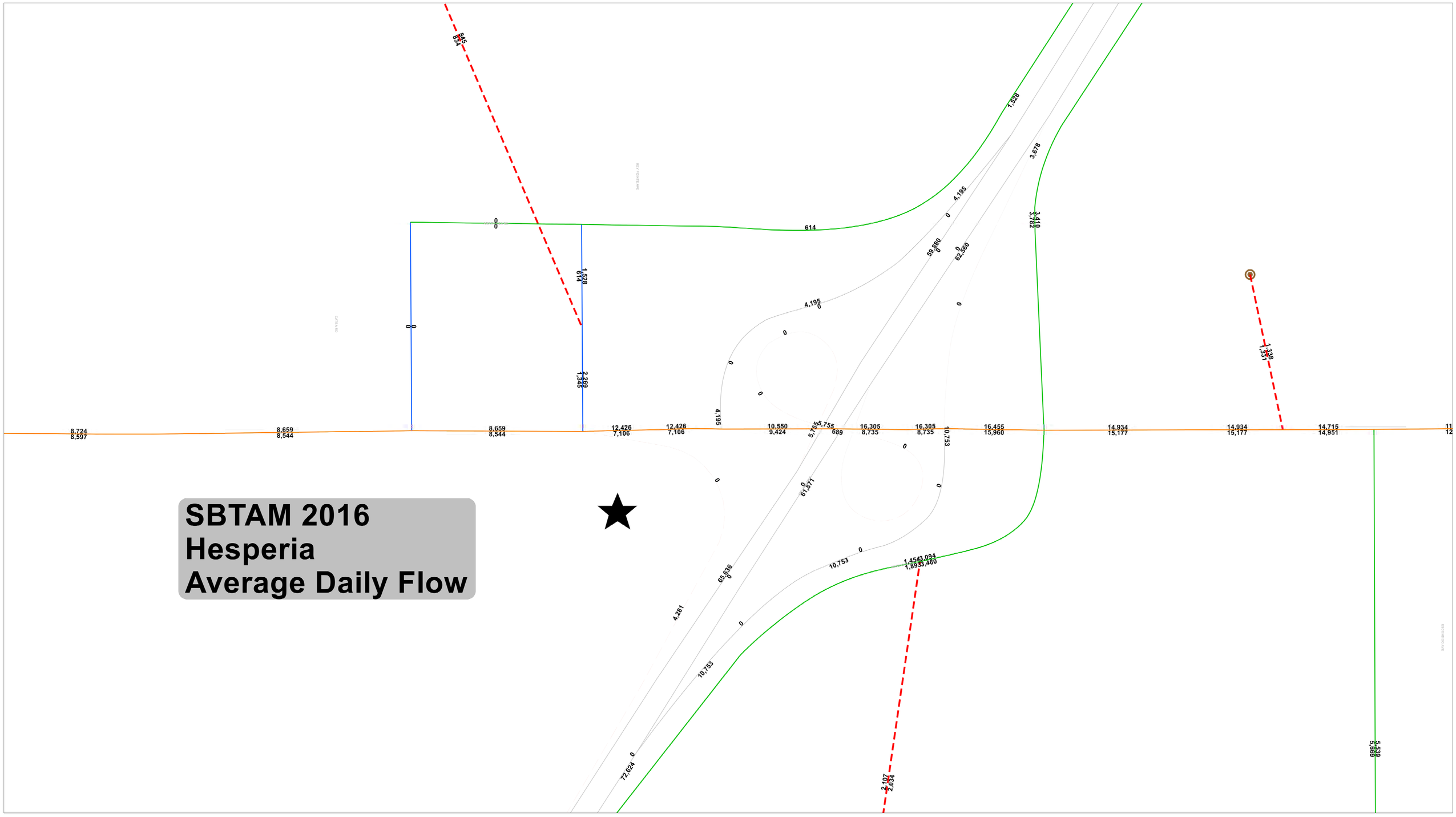
Sequence

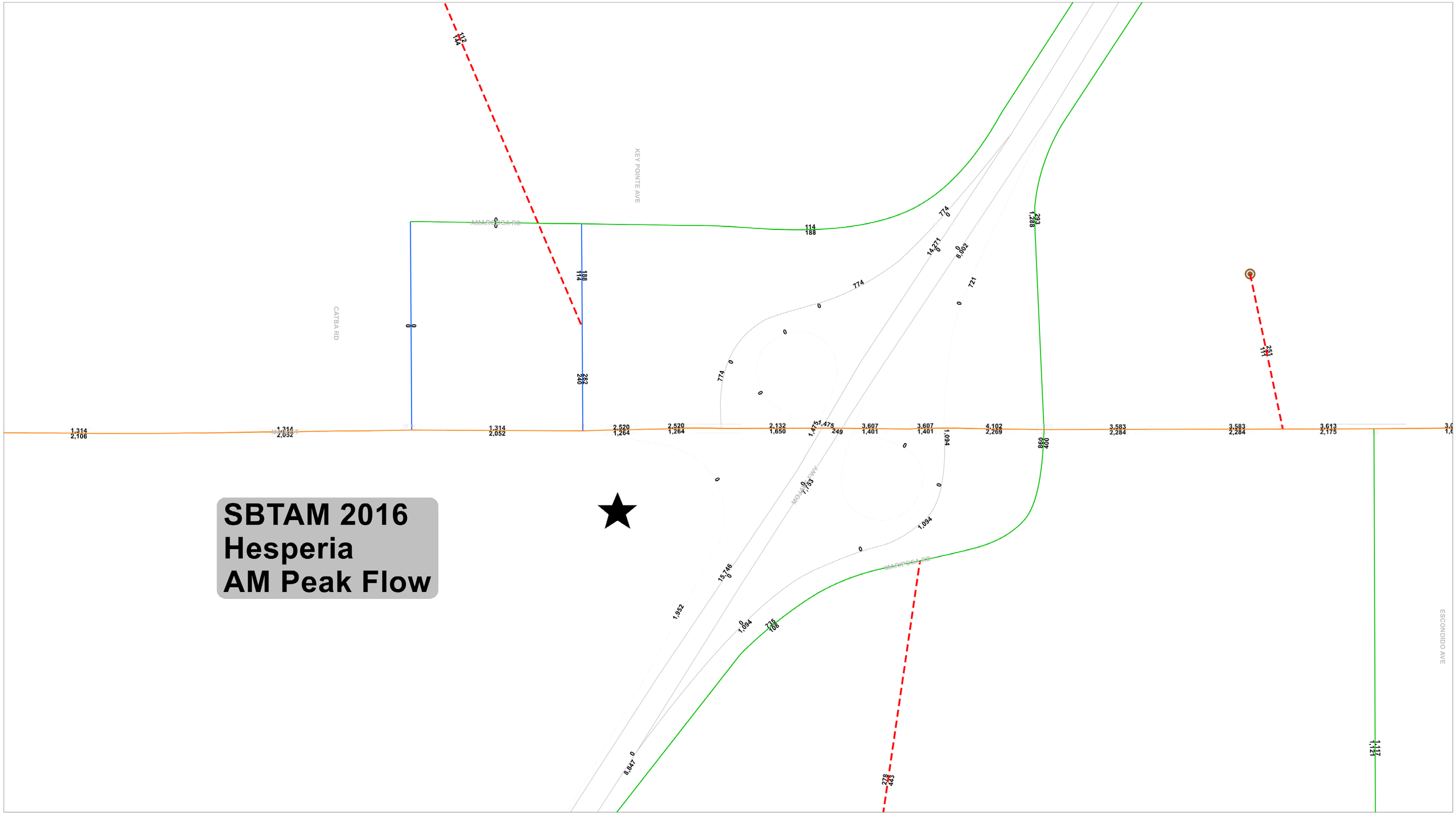
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

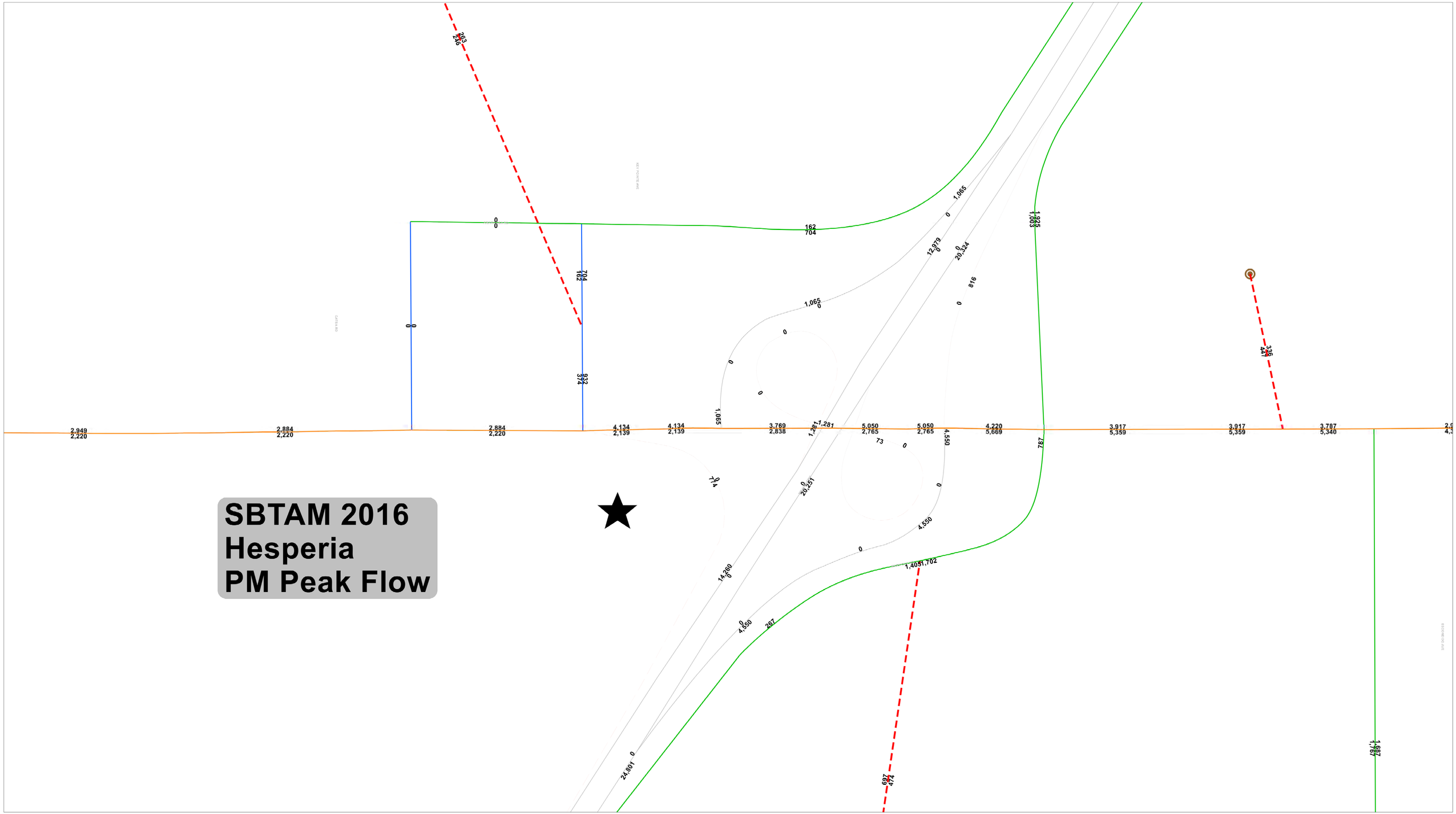


APPENDIX F

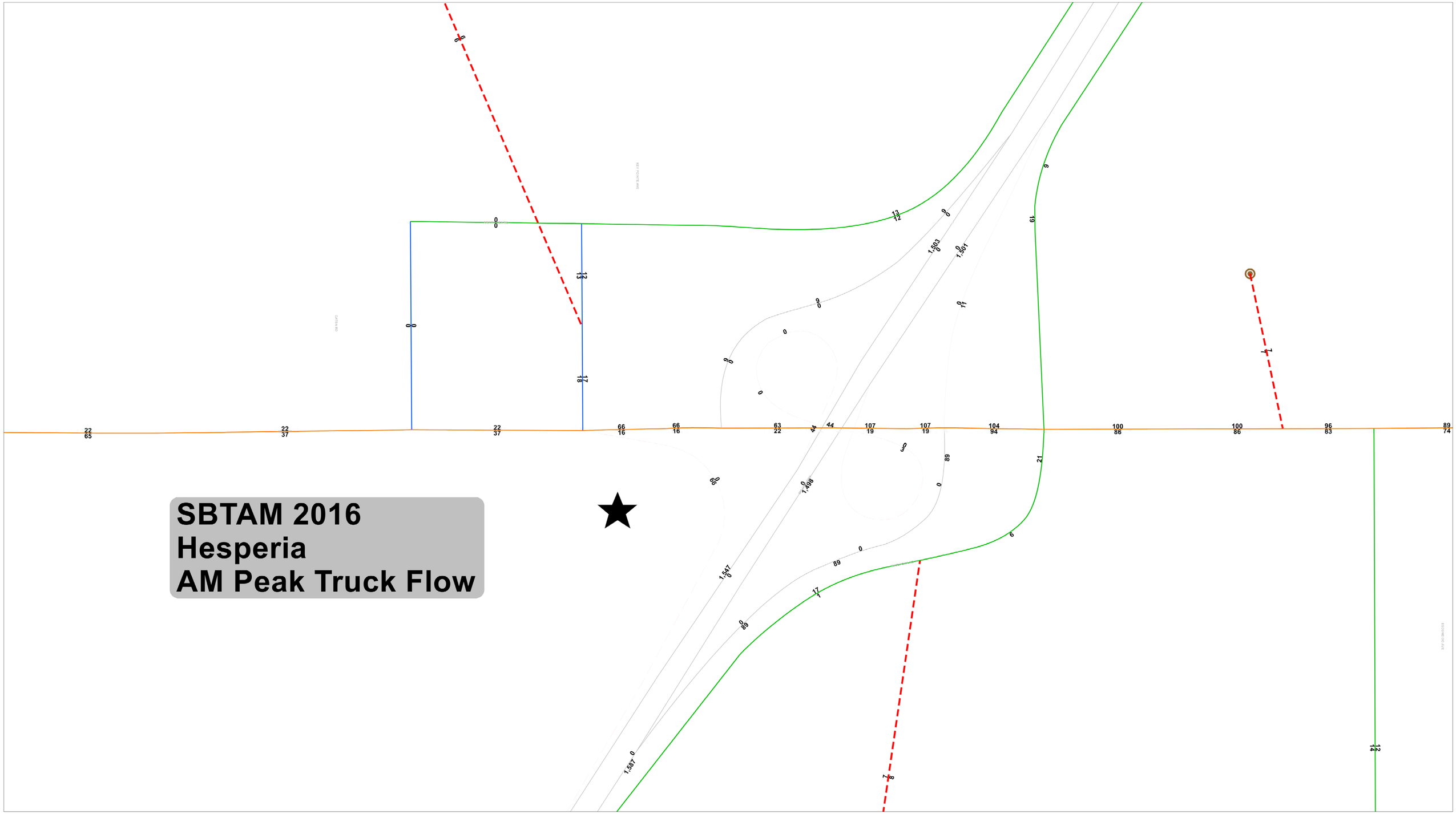
SBTAM MODEL PLOTS

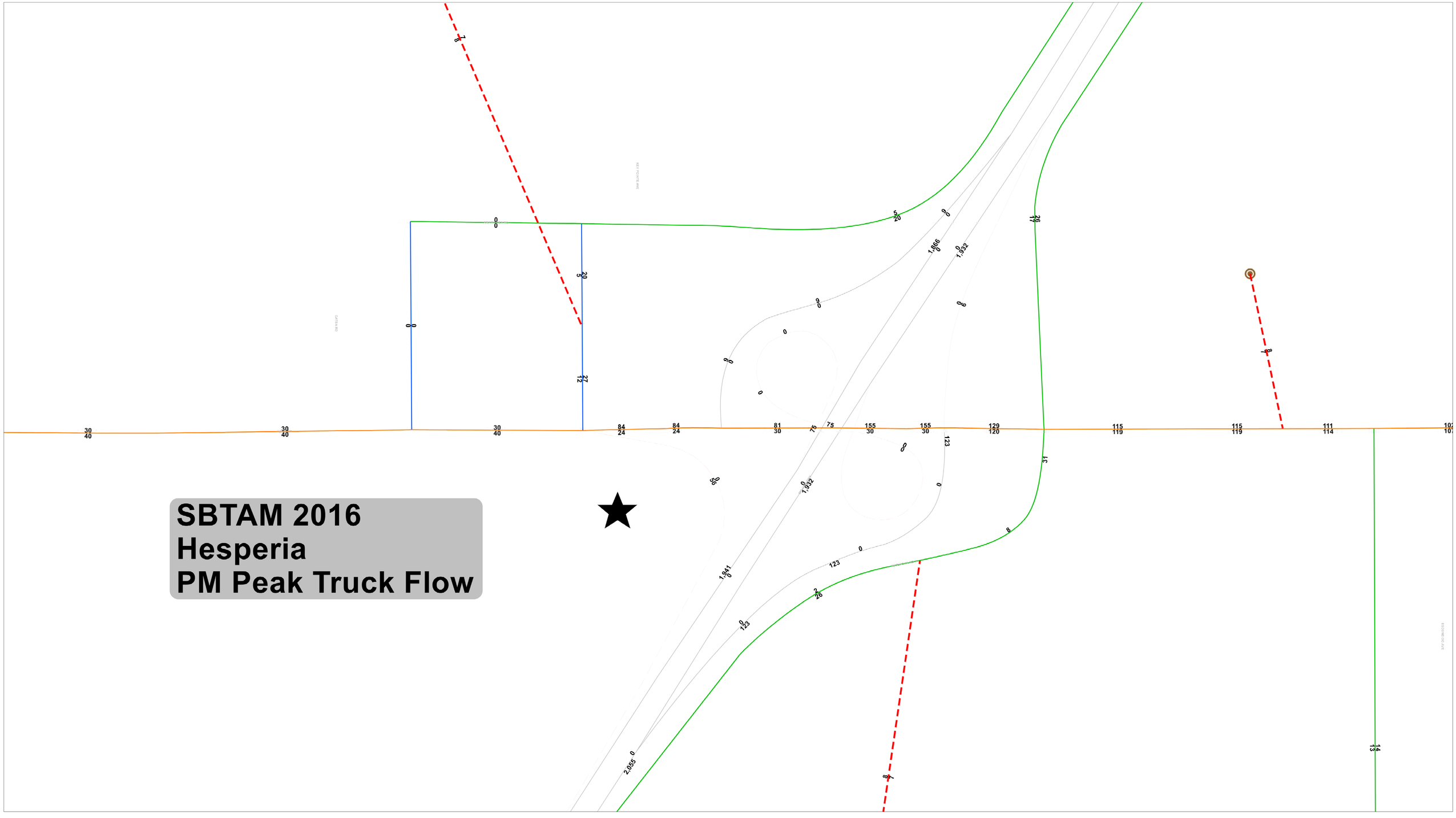

SBTAM 2016
Hesperia
Average Daily Flow

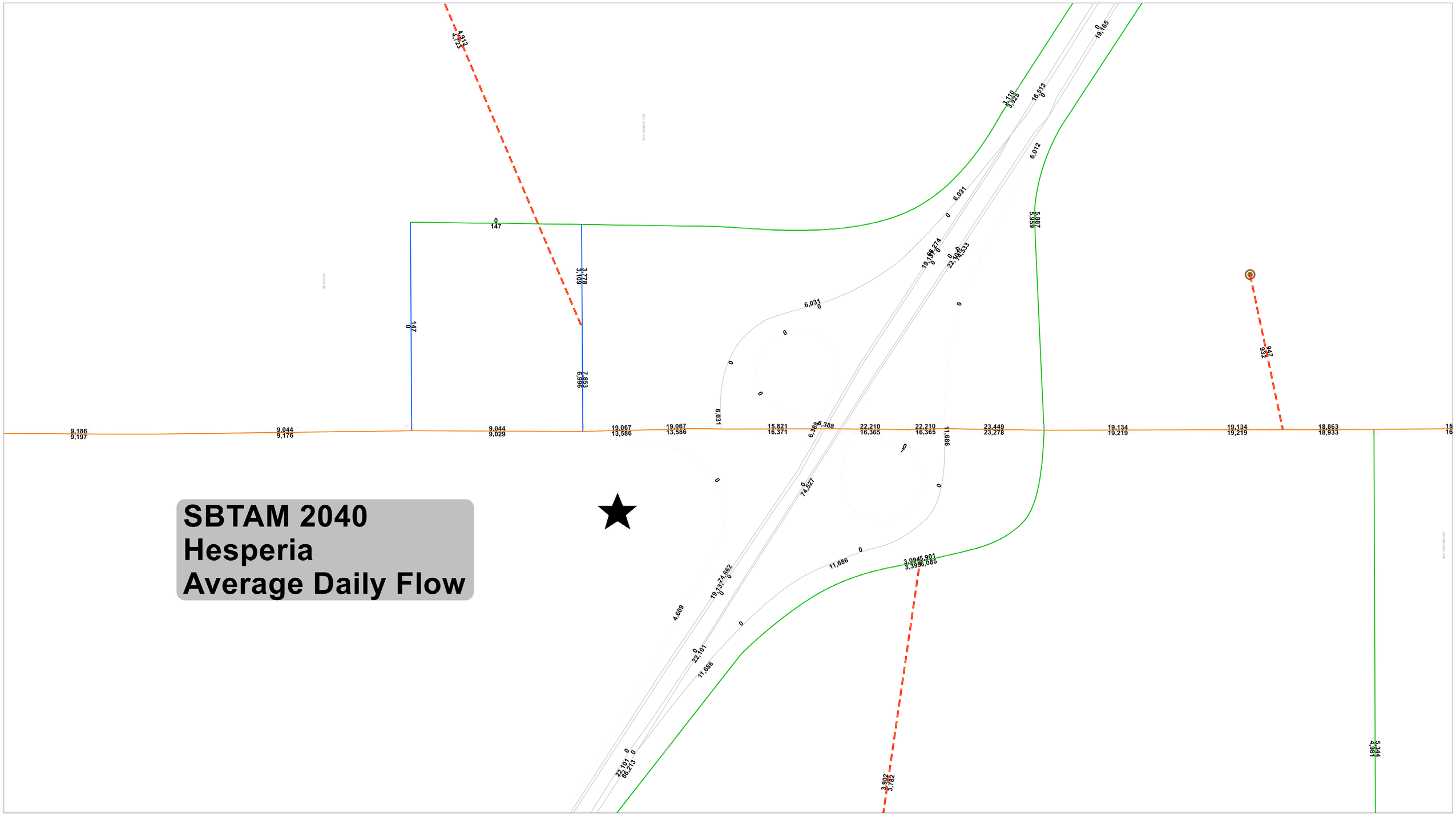

SBTAM 2016
Hesperia
AM Peak Flow
KEY POINTE AVE
CATBA RD
MAXWELL DR
MOJAVE DR
ESCONDIDO AVE
1,314
2,106
1,314
2,032
1,314
2,052
2,520
1,264
2,520
1,264
2,132
1,650
1,475
249
1,475
3,607
1,401
3,607
1,401
4,102
2,269
3,583
2,284
3,583
2,284
3,613
2,175
1,417
1,121
1,094
1,153
15,746
1,952
8,847
774
14,271
8,002
721
1,280
735
108
278
443
240
282
188
114
144
112

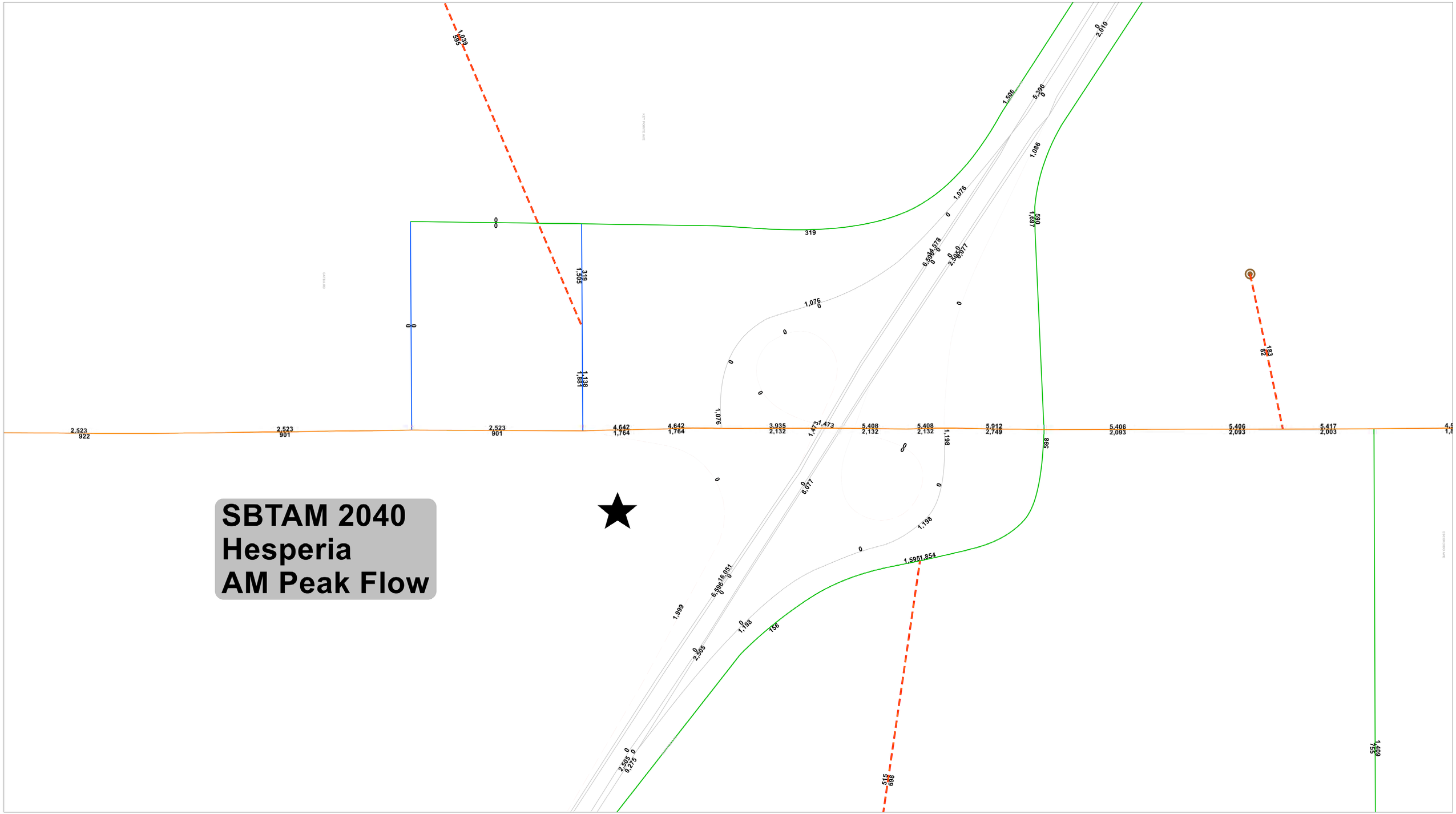

SBTAM 2016
Hesperia
PM Peak Flow

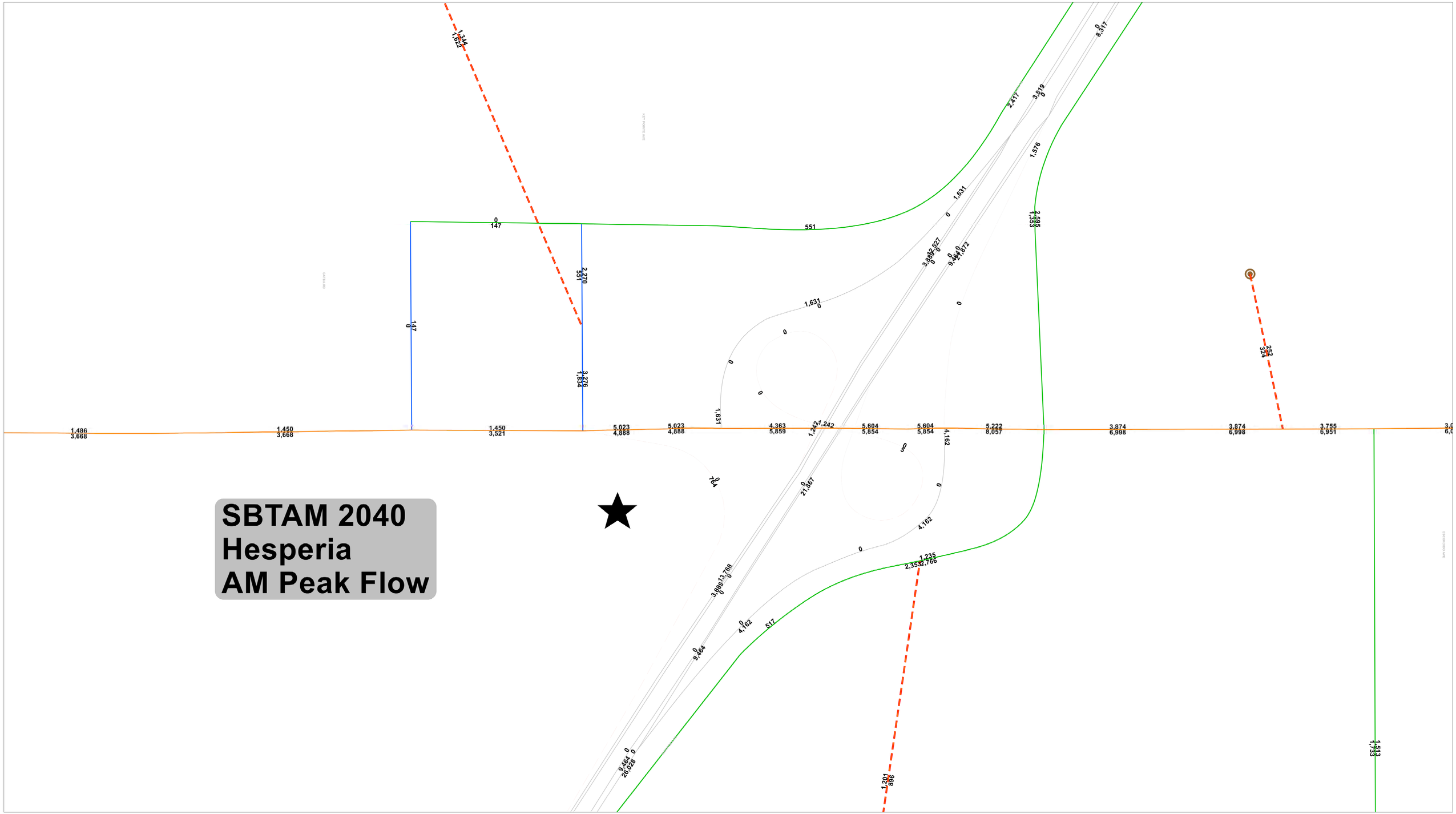
SBTAM 2016
Hesperia
Average Daily Truck Flow

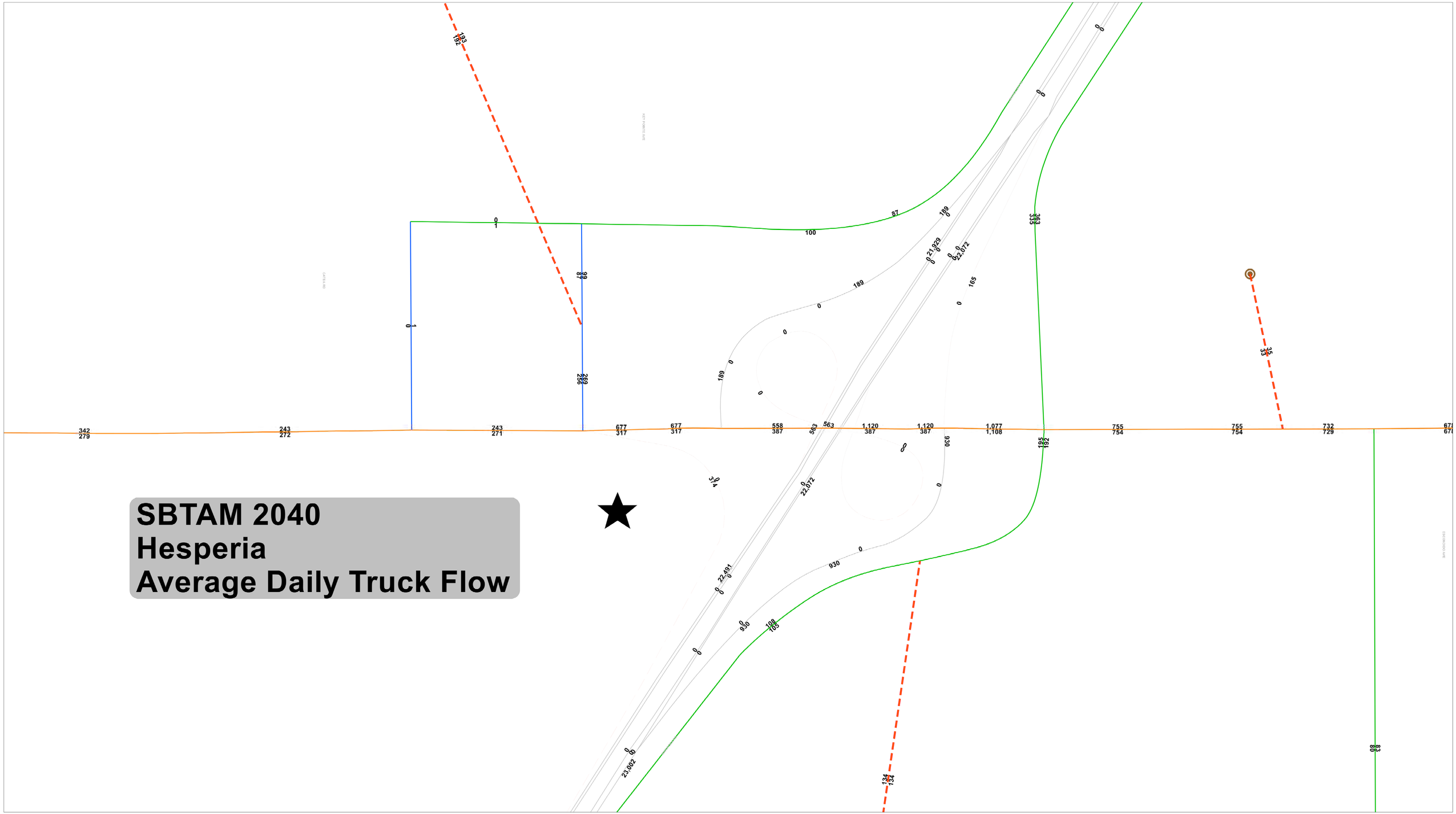

SBTAM 2016
Hesperia
AM Peak Truck Flow

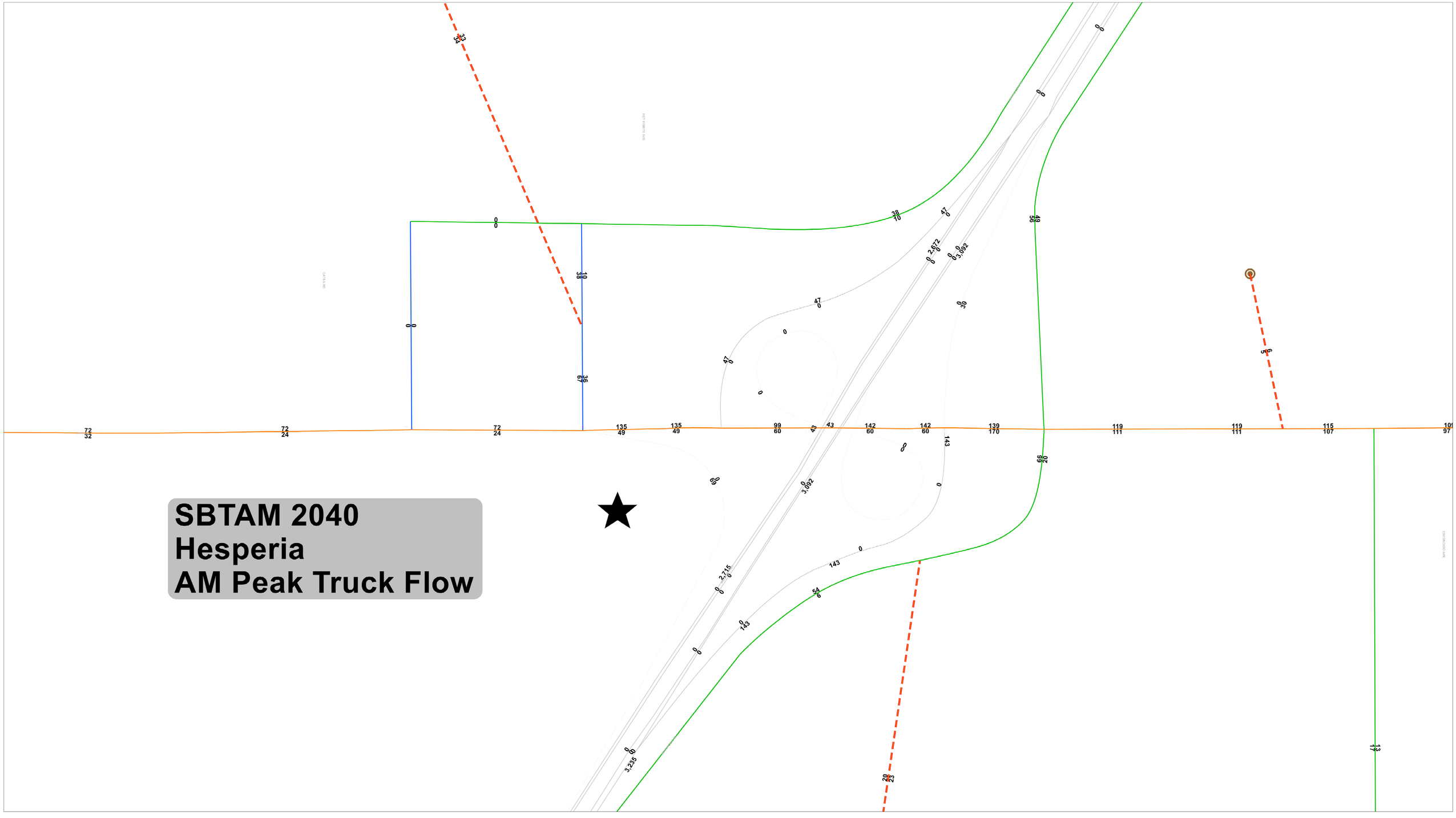

SBTAM 2016
Hesperia
PM Peak Truck Flow


SBTAM 2040
Hesperia
Average Daily Flow

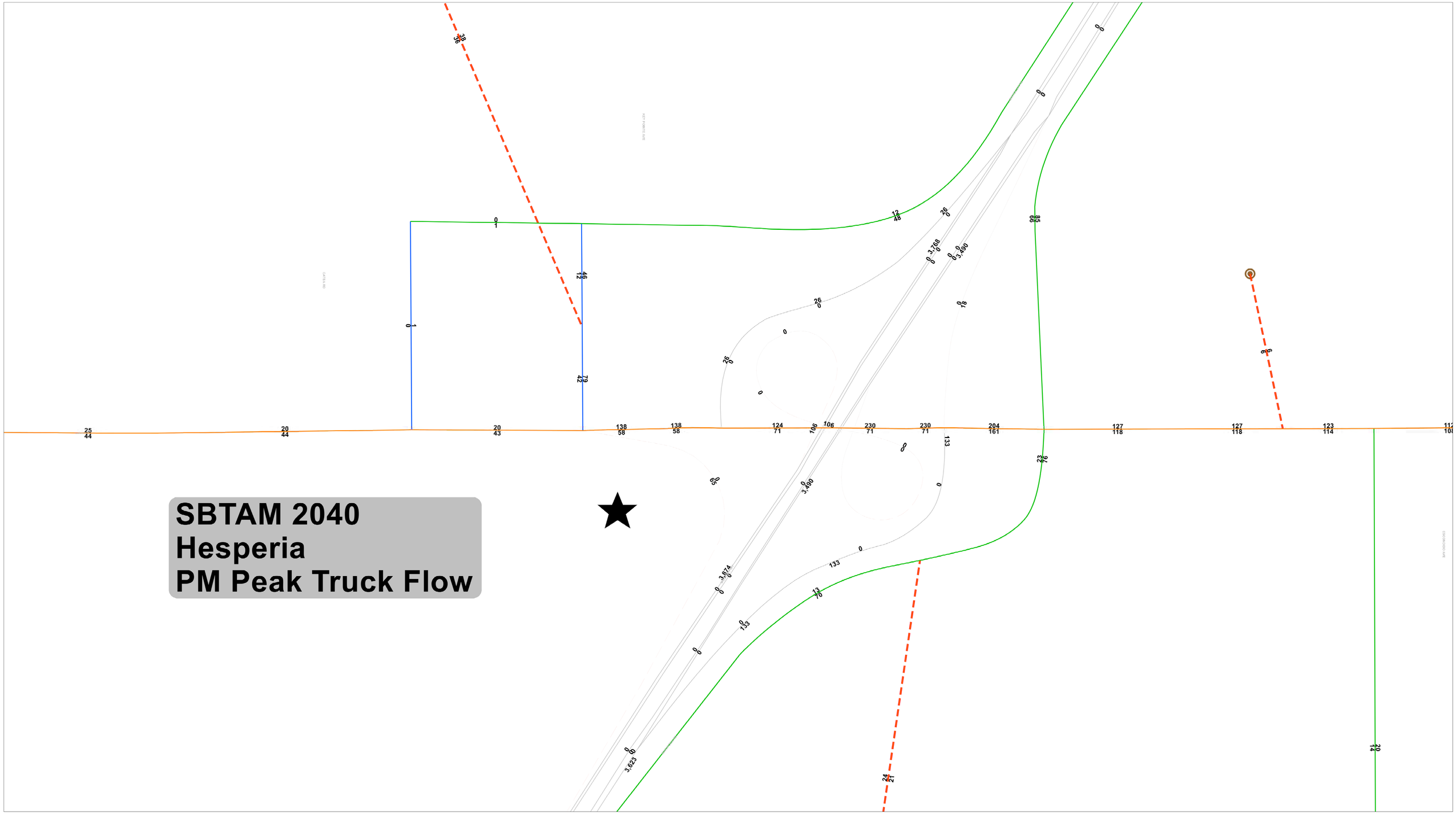

SBTAM 2040
Hesperia
AM Peak Flow


SBTAM 2040
Hesperia
AM Peak Flow


SBTAM 2040
Hesperia
Average Daily Truck Flow


SBTAM 2040
Hesperia
AM Peak Truck Flow

SBTAM 2040
Hesperia
PM Peak Truck Flow



APPENDIX G

POST-PROCESSING WORKSHEETS

INTERSECTION	LEG	CTP 2016 ADT	EXISTING 2022 ADT	CTP 2040 ADT	NEW 2040 ADT[1]	OPENING 2024 ADT
Amargosa Road at Palmetto Way	North	2,244	9,900	7,222	13,600	10,300
	South	2,244	9,900	7,222	13,600	10,300
	East	-	-	-	-	-
	West	-	-	-	-	-
Key Pointe Drive at Amargosa Road	North	-	-	-	-	-
	South	2,244	500	7,073	4,100	900
	East	2,244	7,500	7,222	11,200	7,900
	West	-	7,300	148	8,000	7,400
Key Pointe Drive at Main Street	North	3,774	7,300	15,374	16,000	8,300
	South	-	8,300	-	9,100	8,400
	East	24,616	35,000	38,630	45,500	36,200
	West	17,654	25,200	18,587	27,700	25,500
I-15 SB Ramps at Main Street	North	10,408	13,900	13,171	16,000	14,100
	South	-	-	-	-	-
	East	26,653	40,900	40,088	51,000	42,000
	West	20,058	35,100	33,647	45,300	36,200
I-15 NB Ramps at Main Street	North	3,744	4,700	6,177	6,500	4,900
	South	11,431	13,700	12,616	15,100	13,900
	East	33,711	47,800	48,912	59,200	49,100
	West	25,953	39,000	40,082	49,600	40,200

(1) Adjusted for minimum 10% growth over existing average daily traffic volumes for year 2040.

Amargosa Road (NS) / Palmetto Way (EW) - #1

MORNING PEAK HOUR	EVENING PEAK HOUR
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):	EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):
2022	2022
0 188 0	0 409 0
< v >	< v >
0 ^ ^ 0	0 ^ ^ 0
0 > < 0	0 > < 0
0 v v 0	0 v v 0
< ^ >	< ^ >
0 178 0	1 429 0
EXISTING PEAK HOUR COUNT YEAR (AUTOS):	EXISTING PEAK HOUR COUNT YEAR (AUTOS):
2022	2022
188 178	409 429
v ^	v ^
0 < IN = 366 < 0	1 < IN = 839 < 0
0 > OUT = 366 > 0	0 > OUT = 839 > 0
v ^	v ^
188 178	409 430
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):	EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):
0 20 0	0 8 0
< v >	< v >
0 ^ ^ 0	0 ^ ^ 0
0 > < 0	0 > < 0
0 v v 0	0 v v 0
PCE FACTORS BY AXLE: < ^ >	PCE FACTORS BY AXLE: < ^ >
2: 1.5 3: 2.0 4+: 3.0 0 18 0	2: 1.5 3: 2 4+: 3.0 0 14 0
TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):	TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):
2022	2022
0 208 0	0 417 0
< v >	< v >
0 ^ ^ 0	0 ^ ^ 0
0 > < 0	0 > < 0
0 v v 0	0 v v 0
< ^ >	< ^ >
0 196 0	1 443 0
EXISTING PEAK PERIOD MODEL YEAR (AUTO):	EXISTING PEAK PERIOD MODEL YEAR (AUTO):
2016	2016
114 188	162 704
v ^	v ^
0 < IN = 302 < 0	0 < IN = 866 < 0
0 > OUT = 302 > 0	0 > OUT = 866 > 0
v ^	v ^
114 188	162 704
EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):	EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):
2016	2016
13 12	5 20
v ^	v ^
0 < IN = 25 < 0	0 < IN = 25 < 0
0 > OUT = 25 > 0	0 > OUT = 25 > 0
v ^	v ^
13 12	5 20
EXISTING PEAK HOUR MODEL YEAR (PCEs):	EXISTING PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 0.38	PHF FOR CARS: 0.28
PHF FOR TRUCKS: 0.333	PHF FOR TRUCKS: 0.25
48 75	47 202
v ^	v ^
0 < IN = 123 < 0	0 < IN = 249 < 0
0 > OUT = 123 > 0	0 > OUT = 249 > 0
v ^	v ^
48 75	47 202
FUTURE PEAK PERIOD MODEL YEAR (AUTO):	FUTURE PEAK PERIOD MODEL YEAR (AUTO):
2040	2040
1506 319	551 2417
v ^	v ^
0 < IN = 1825 < 0	0 < IN = 2968 < 0
0 > OUT = 1825 > 0	0 > OUT = 2968 > 0
v ^	v ^
1506 319	551 2417
FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):	FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):
2040	2040
38 10	12 48
v ^	v ^
0 < IN = 48 < 0	0 < IN = 60 < 0
0 > OUT = 48 > 0	0 > OUT = 60 > 0
v ^	v ^
38 10	12 48
FUTURE PEAK HOUR MODEL YEAR (PCEs):	FUTURE PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 0.38	PHF FOR CARS: 0.28
PHF FOR TRUCKS: 0.333	PHF FOR TRUCKS: 0.25
585 125	157 689
v ^	v ^
0 < IN = 709 < 0	0 < IN = 846 < 0
0 > OUT = 709 > 0	0 > OUT = 846 > 0
v ^	v ^
585 125	157 689
RAW GROWTH (PCEs): 2016 TO 2040	RAW GROWTH (PCEs): 2016 TO 2040
CONVERSION OF TRUCKS TO: 2040	CONVERSION OF TRUCKS TO: 2040
537 49	111 487
FACTOR = 1.00 v ^	FACTOR = 1.00 v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
537 49	111 487

Amargosa Road (NS) / Palmetto Way (EW) - #1

MORNING PEAK HOUR	EVENING PEAK HOUR
ADJUSTED GROWTH (PCEs): 2016 TO 2040	ADJUSTED GROWTH (PCEs): 2016 TO 2040
10.00 MINIMUM GROWTH %	10 MINIMUM GROWTH %
540 50	110 490
v ^	v ^
0 < IN = 590 < 0	0 < IN = 600 < 0
0 > OUT = 590 > 0	0 > OUT = 600 > 0
v ^	v ^
540 50	110 490
PRORATED GROWTH (PCEs): 2022 TO 2040	PRORATED GROWTH (PCEs): 2022 TO 2040
18 YEARS	18 YEARS
410 40	80 370
v ^	v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
410 40	80 370
NEW PROJECTED VOLUMES (PCEs): 2040	NEW PROJECTED VOLUMES (PCEs): 2040
620 240	500 810
v ^	v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
620 240	500 810
YEAR 2024 GROWTH: 2022 TO 2024	YEAR 2024 GROWTH: 2022 TO 2024
2 YEARS	2 YEARS
50 0	10 40
v ^	v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
50 0	10 40
INITIAL YEAR 2024 VOLUMES:	INITIAL YEAR 2024 VOLUMES:
2024	2024
260 200	430 480
v ^	v ^
0 < IN = 460 < 0	0 < IN = 910 < 0
0 > OUT = 460 > 0	0 > OUT = 910 > 0
v ^	v ^
260 200	430 480
BALANCED YEAR 2024 VOLUMES:	BALANCED YEAR 2024 VOLUMES:
2024	2024
260 200	430 480
v ^	v ^
0 < IN = 460 < 0	0 < IN = 910 < 0
0 > OUT = 460 > 0	0 > OUT = 910 > 0
v ^	v ^
260 200	430 480
ADT BY LEG:	ADT BY LEG:
2040	2040
13,600	13,600
N	N
0 W LEG E 0	0 W LEG E 0
S	S
13,600	13,600
ADT BY LEG:	ADT BY LEG:
2024	2024
10,300	10,300
N	N
0 W LEG E 0	0 W LEG E 0
S	S
10,300	10,300

Amargosa Road (NS) / Palmetto Way (EW) - #1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**1**	SOUTH LEG	
BOUND	THRU	**196**	IN ...	**240**	BOUND	THRU	**443**	IN ...	**810**
	RIGHT	**0**	OUT ...	**620**		RIGHT	**0**	OUT ...	**500**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**208**	IN ...	**620**	BOUND	THRU	**417**	IN ...	**500**
	RIGHT	**0**	OUT ...	**240**		RIGHT	**0**	OUT ...	**810**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**1**	**1**	NORTH LEG
BOUND	THRU	**196**	**240**	RATIO **6.3%**	BOUND	THRU	**443**	**810**	RATIO **9.6%**
	RIGHT	**0**	**0**	ADT 13,600		RIGHT	**0**	**0**	ADT 13,600
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG
BOUND	THRU	**208**	**620**	RATIO **6.3%**	BOUND	THRU	**417**	**500**	RATIO **9.6%**
	RIGHT	**0**	**0**	ADT 13,600		RIGHT	**0**	**0**	ADT 13,600
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**
	RIGHT	**0**	**0**	ADT 0		RIGHT	**0**	**0**	ADT 0
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**
	RIGHT	**0**	**0**	ADT 0		RIGHT	**0**	**0**	ADT 0

Key Pointe Drive (NS) / Amargosa Road (EW) - #2

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	145	>				<	122	
	1	v				v	7	
			<	^	>			
			0	0	5			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	0			
				v	^			
	122	<	IN =	280	<	129		
	146	>	OUT =	280	>	150		
				v	^			
				8	5			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
	0	^				^	0	
	18	>				<	18	
	0	v				v	0	
			<	^	>			
			0	0	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	163	>				<	140	
	1	v				v	7	
			<	^	>			
			0	0	5			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	0			
				v	^			
	0	<	IN =	302	<	114		
	0	>	OUT =	302	>	188		
				v	^			
				114	188			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	0			
				v	^			
	0	<	IN =	25	<	13		
	0	>	OUT =	25	>	12		
				v	^			
				13	12			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	0			
				v	^			
	0	<	IN =	123	<	48		
	0	>	OUT =	123	>	75		
				v	^			
				48	75			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	0			
				v	^			
	0	<	IN =	1825	<	1506		
	0	>	OUT =	1824	>	319		
				v	^			
				1505	319			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	0			
				v	^			
	0	<	IN =	48	<	38		
	0	>	OUT =	48	>	10		
				v	^			
				38	10			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	0			
				v	^			
	0	<	IN =	709	<	585		
	0	>	OUT =	709	>	125		
				v	^			
				585	125			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	0			
				v	^			
	0	<			<	537		
	0	>			>	49		
				v	^			
				537	49			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	262	>				<	309	
	9	v				v	9	
			<	^	>			
			1	0	11			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	0			
				v	^			
	310	<	IN =	601	<	318		
	271	>	OUT =	601	>	273		
				v	^			
				18	12			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
	0	^				^	0	
	25	>				<	26	
	0	v				v	3	
			<	^	>			
			2	0	8			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	287	>				<	335	
	9	v				v	12	
			<	^	>			
			3	0	19			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	0			
				v	^			
	0	<	IN =	866	<	162		
	0	>	OUT =	866	>	704		
				v	^			
				162	704			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	0			
				v	^			
	0	<	IN =	25	<	5		
	0	>	OUT =	25	>	20		
				v	^			
				5	20			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	0			
				v	^			
	0	<	IN =	249	<	47		
	0	>	OUT =	249	>	202		
				v	^			
				47	202			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	0			
				v	^			
	0	<	IN =	2968	<	551		
	147	>	OUT =	2968	>	2417		
				v	^			
				551	2270			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	0			
				v	^			
	0	<	IN =	59	<	12		
	1	>	OUT =	60	>	48		
				v	^			
				12	46			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	0			
				v	^			
	0	<	IN =	846	<	157		
	41	>	OUT =	846	>	689		
				v	^			
				157	647			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	0			
				v	^			
	0	<			<	111		
	41	>			>	487		
				v	^			
				111	445			

Key Pointe Drive (NS) / Amargosa Road (EW) - #2

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					0	0				10 MINIMUM GROWTH %					0	0			
					v	^									v	^			
			10	<	IN =	610	<	540					30	<	IN =	590	<	110	
			20	>	OUT =	600	>	50					40	>	OUT =	630	>	490	
					v	^									v	^			
					540	50									110	440			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					0	0				18 YEARS					0	0			
					v	^									v	^			
			10	<			<	410					20	<			<	80	
			20	>			>	40					30	>			>	370	
					v	^									v	^			
					410	40									80	330			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					0	0									0	0			
					v	^									v	^			
			150	<			<	560					360	<			<	430	
			180	>			>	210					330	>			>	680	
					v	^									v	^			
					420	50									100	350			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					0	0				2 YEARS					0	0			
					v	^									v	^			
			0	<			<	50					0	<			<	10	
			0	>			>	0					0	>			>	40	
					v	^									v	^			
					50	0									10	40			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					0	0				2024					0	0			
					v	^									v	^			
			140	<	IN =	370	<	200					340	<	IN =	720	<	360	
			160	>	OUT =	370	>	170					300	>	OUT =	720	>	350	
					v	^									v	^			
					60	10									30	60			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					0	0				2024					0	0			
					v	^									v	^			
			140	<	IN =	370	<	200					340	<	IN =	720	<	360	
			160	>	OUT =	370	>	170					300	>	OUT =	720	>	350	
					v	^									v	^			
					60	10									30	60			
ADT BY LEG:										ADT BY LEG:									
2040					0					2040					0				
					N										N				
			8,000	W	LEG	E		11,200					8,000	W	LEG	E		11,200	
					S										S				
					4,100										4,100				
ADT BY LEG:										ADT BY LEG:									
2024					0					2024					0				
					N										N				
			7,400	W	LEG	E		7,900					7,400	W	LEG	E		7,900	
					S										S				
					900										900				

Key Pointe Drive (NS) / Amargosa Road (EW) - #2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**3**	SOUTH LEG	
BOUND	THRU	**0**	IN ...	**50**	BOUND	THRU	**0**	IN ...	**350**
	RIGHT	**5**	OUT ...	**420**		RIGHT	**19**	OUT ...	**100**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**163**	IN ...	**180**	BOUND	THRU	**287**	IN ...	**330**
	RIGHT	**1**	OUT ...	**150**		RIGHT	**9**	OUT ...	**360**
WEST	LEFT	**7**	EAST LEG		WEST	LEFT	**12**	EAST LEG	
BOUND	THRU	**140**	IN ...	**560**	BOUND	THRU	**335**	IN ...	**430**
	RIGHT	**0**	OUT ...	**210**		RIGHT	**0**	OUT ...	**680**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**3**	**18**	NORTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**5**	**49**	ADT	0		RIGHT	**19**	**352**	ADT	0
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**11.4%**	BOUND	THRU	**0**	**0**	RATIO	**11.5%**
	RIGHT	**0**	**0**	ADT	4,100		RIGHT	**0**	**0**	ADT	4,100
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**163**	**179**	RATIO	**7.0%**	BOUND	THRU	**287**	**328**	RATIO	**10.1%**
	RIGHT	**1**	**17**	ADT	11,200		RIGHT	**9**	**21**	ADT	11,200
WEST	LEFT	**7**	**403**	WEST LEG		WEST	LEFT	**12**	**79**	WEST LEG	
BOUND	THRU	**140**	**154**	RATIO	**4.4%**	BOUND	THRU	**335**	**369**	RATIO	**9.2%**
	RIGHT	**0**	**0**	ADT	8,000		RIGHT	**0**	**0**	ADT	8,000

Key Pointe Drive (NS) / Main Street (EW) - #3

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022			8	26	114			
			<	v	>			
	19	^				^	115	
	752	>				<	477	
	8	v				v	184	
			<	^	>			
			4	12	91			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022				148	146			
				v	^			
	489	<	IN =	1810		<	776	
	779	>	OUT =	1810		>	957	
				v	^			
				218	107			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			3	0	23			
			<	v	>			
	11	^				^	17	
	174	>				<	130	
	0	v				v	9	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2.0 4+: 3.0			0	0	6			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022			11	26	137			
			<	v	>			
	30	^				^	132	
	926	>				<	607	
	8	v				v	193	
			<	^	>			
			4	12	97			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016				240	282			
				v	^			
	1314	<	IN =	4812		<	2520	
	2052	>	OUT =	4812		>	3216	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016				18	17			
				v	^			
	22	<	IN =	121		<	66	
	37	>	OUT =	121		>	82	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.38			97	113			
PHF FOR TRUCKS:	0.333			v	^			
	507	<	IN =	1869		<	980	
	792	>	OUT =	1869		>	1249	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040				1881	1138			
				v	^			
	2523	<	IN =	7424		<	4642	
	901	>	OUT =	7424		>	3763	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040				67	36			
				v	^			
	72	<	IN =	226		<	135	
	24	>	OUT =	226		>	118	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.38			737	444			
PHF FOR TRUCKS:	0.333			v	^			
	983	<	IN =	2896		<	1809	
	350	>	OUT =	2896		>	1469	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO:	2040			640	332			
FACTOR =	1.00			v	^			
	476	<				<	829	
	-442	>				>	220	
				v	^			
				0	0			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022			15	84	213			
			<	v	>			
	44	^				^	182	
	855	>				<	1015	
	18	v				v	287	
			<	^	>			
			31	55	232			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022				312	281			
				v	^			
	1061	<	IN =	3031		<	1484	
	917	>	OUT =	3031		>	1300	
				v	^			
				389	318			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	23			
			<	v	>			
	2	^				^	12	
	115	>				<	96	
	0	v				v	8	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2 4+: 3.0			0	2	9			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022			15	84	236			
			<	v	>			
	46	^				^	194	
	970	>				<	1111	
	18	v				v	295	
			<	^	>			
			31	57	241			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016				374	932			
				v	^			
	2884	<	IN =	6728		<	4134	
	2220	>	OUT =	6729		>	2913	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016				12	27			
				v	^			
	30	<	IN =	136		<	84	
	40	>	OUT =	137		>	80	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.28			108	268			
PHF FOR TRUCKS:	0.25			v	^			
	815	<	IN =	1918		<	1179	
	632	>	OUT =	1918		>	836	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040				1834	3276			
				v	^			
	1450	<	IN =	10378		<	5023	
	3521	>	OUT =	10378		>	5652	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040				42	79			
				v	^			
	20	<	IN =	223		<	138	
	43	>	OUT =	222		>	123	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.28			524	937			
PHF FOR TRUCKS:	0.25			v	^			
	411	<	IN =	2962		<	1441	
	997	>	OUT =	2961		>	1613	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO:	2040			416	669			
FACTOR =	1.00			v	^			
	-404	<				<	262	
	365	>				>	778	
				v	^			
				0	0			

Key Pointe Drive (NS) / Main Street (EW) - #3

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					640	330				10 MINIMUM GROWTH %					420	670			
					v	^									v	^			
			480	<	IN =	1570	<	830					120	<	IN =	1050	<	260	
			100	>	OUT =	1030	>	220					370	>	OUT =	1570	>	780	
					v	^									v	^			
					0	0									0	0			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					480	250				18 YEARS					320	500			
					v	^									v	^			
			360	<			<	620					90	<			<	200	
			80	>			>	170					280	>			>	590	
					v	^									v	^			
					0	0									0	0			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					650	420									660	800			
					v	^									v	^			
			980	<			<	1550					1250	<			<	1800	
			1040	>			>	1330					1310	>			>	2040	
					v	^									v	^			
					230	110									400	330			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					50	30				2 YEARS					40	60			
					v	^									v	^			
			40	<			<	70					10	<			<	20	
			10	>			>	20					30	>			>	70	
					v	^									v	^			
					0	0									0	0			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					220	200				2024					380	360			
					v	^									v	^			
			660	<	IN =	2300	<	1000					1170	<	IN =	3390	<	1620	
			970	>	OUT =	2270	>	1180					1060	>	OUT =	3450	>	1520	
					v	^									v	^			
					230	110									400	330			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					220	200				2024					390	360			
					v	^									v	^			
			670	<	IN =	2300	<	1000					1170	<	IN =	3460	<	1650	
			970	>	OUT =	2300	>	1200					1080	>	OUT =	3450	>	1520	
					v	^									v	^			
					230	110									400	340			
ADT BY LEG:										ADT BY LEG:									
2040					16,000					2040					16,000				
					N										N				
			27,700	W	LEG	E		45,500					27,700	W	LEG	E		45,500	
					S										S				
					9,100										9,100				
ADT BY LEG:										ADT BY LEG:									
2024					8,300					2024					8,300				
					N										N				
			25,500	W	LEG	E		36,200					25,500	W	LEG	E		36,200	
					S										S				
					8,400										8,400				

Key Pointe Drive (NS) / Main Street (EW) - #3

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**4**	SOUTH LEG		NORTH	LEFT	**31**	SOUTH LEG	
BOUND	THRU	**12**	IN ...	**110**	BOUND	THRU	**57**	IN ...	**330**
	RIGHT	**97**	OUT ...	**230**		RIGHT	**241**	OUT ...	**400**
SOUTH	LEFT	**137**	NORTH LEG		SOUTH	LEFT	**236**	NORTH LEG	
BOUND	THRU	**26**	IN ...	**650**	BOUND	THRU	**84**	IN ...	**660**
	RIGHT	**11**	OUT ...	**420**		RIGHT	**15**	OUT ...	**800**
EAST	LEFT	**30**	WEST LEG		EAST	LEFT	**46**	WEST LEG	
BOUND	THRU	**926**	IN ...	**1,040**	BOUND	THRU	**970**	IN ...	**1,310**
	RIGHT	**8**	OUT ...	**980**		RIGHT	**18**	OUT ...	**1,250**
WEST	LEFT	**193**	EAST LEG		WEST	LEFT	**295**	EAST LEG	
BOUND	THRU	**607**	IN ...	**1,550**	BOUND	THRU	**1,111**	IN ...	**1,800**
	RIGHT	**132**	OUT ...	**1,330**		RIGHT	**194**	OUT ...	**2,040**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**4**	**5**	NORTH LEG	NORTH	LEFT	**31**	**34**	NORTH LEG	
BOUND	THRU	**12**	**23**	RATIO **6.2%**	BOUND	THRU	**57**	**121**	RATIO **9.5%**	
	RIGHT	**97**	**107**	ADT 16,000		RIGHT	**241**	**265**	ADT 16,000	
SOUTH	LEFT	**137**	**436**	SOUTH LEG	SOUTH	LEFT	**236**	**551**	SOUTH LEG	
BOUND	THRU	**26**	**73**	RATIO **4.7%**	BOUND	THRU	**84**	**139**	RATIO **9.9%**	
	RIGHT	**11**	**60**	ADT 9,100		RIGHT	**15**	**32**	ADT 9,100	
EAST	LEFT	**30**	**74**	EAST LEG	EAST	LEFT	**46**	**143**	EAST LEG	
BOUND	THRU	**926**	**1,019**	RATIO **6.6%**	BOUND	THRU	**970**	**1,274**	RATIO **9.2%**	
	RIGHT	**8**	**9**	ADT 45,500		RIGHT	**18**	**20**	ADT 45,500	
WEST	LEFT	**193**	**212**	WEST LEG	WEST	LEFT	**295**	**325**	WEST LEG	
BOUND	THRU	**607**	**916**	RATIO **7.5%**	BOUND	THRU	**1,111**	**1,222**	RATIO **9.8%**	
	RIGHT	**132**	**323**	ADT 27,700		RIGHT	**194**	**536**	ADT 27,700	

I-15 SB Ramps (NS) / Main Street (EW) - #4

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			145	0	252			
			<	v	>			
0	^					^	363	
848	>					<	632	
111	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				397	363			
				v	^			
777	<	IN =	2351			<	995	
959	>	OUT =	2351			>	1100	
			v	^				
			111	0				

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			32	0	56			
			<	v	>			
0	^					^	148	
161	>					<	124	
42	v					v	0	
			<	^	>			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

			0	0	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			177	0	308			
			<	v	>			
0	^					^	511	
1009	>					<	756	
153	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				774	1475			
				v	^			
2520	<	IN =	5645			<	3607	
1264	>	OUT =	5645			>	1650	
			v	^				
			0	0				

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				9	44			
				v	^			
66	<	IN =	132			<	107	
16	>	OUT =	132			>	22	
			v	^				
			0	0				

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				297	575			
				v	^			
980	<	IN =	2189			<	1406	
486	>	OUT =	2189			>	634	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				1076	1473			
				v	^			
4642	<	IN =	8248			<	5408	
1764	>	OUT =	8247			>	2132	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				47	43			
				v	^			
135	<	IN =	238			<	142	
49	>	OUT =	238			>	60	
			v	^				
			0	0				

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				425	574			
				v	^			
1809	<	IN =	3213			<	2102	
687	>	OUT =	3213			>	830	
			v	^				
			0	0				

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				127	-1			
				v	^			
829	<					<	696	
201	>					>	196	
			v	^				
			0	0				

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			313	0	418			
			<	v	>			
0	^					^	337	
1161	>					<	1172	
142	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				731	337			
				v	^			
1485	<	IN =	3543			<	1509	
1303	>	OUT =	3543			>	1579	
			v	^				
			142	0				

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			38	0	25			
			<	v	>			
0	^					^	81	
111	>					<	81	
36	v					v	0	
			<	^	>			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

			0	0	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			351	0	443			
			<	v	>			
0	^					^	418	
1272	>					<	1253	
178	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				1065	1281			
				v	^			
4134	<	IN =	8254			<	5050	
2139	>	OUT =	8253			>	2838	
			v	^				
			0	0				

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				9	75			
				v	^			
84	<	IN =	189			<	156	
24	>	OUT =	189			>	30	
			v	^				
			0	0				

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				300	377			
				v	^			
1179	<	IN =	2358			<	1453	
605	>	OUT =	2358			>	802	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				1631	1242			
				v	^			
5023	<	IN =	12124			<	5605	
4888	>	OUT =	12124			>	5859	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				26	106			
				v	^			
138	<	IN =	314			<	230	
58	>	OUT =	315			>	71	
			v	^				
			0	0				

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				463	374			
				v	^			
1441	<	IN =	3473			<	1627	
1383	>	OUT =	3473			>	1658	
			v	^				
			0	0				

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				163	-3			
				v	^			
262	<					<	174	
778	>					>	856	
			v	^				
			0	0				

I-15 SB Ramps (NS) / Main Street (EW) - #4

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					130	50				10 MINIMUM GROWTH %					160	40			
					v	^									v	^			
			830	<	IN =	1030	<	700					260	<	IN =	1110	<	170	
			200	>	OUT =	1080	>	200					780	>	OUT =	1160	>	860	
					v	^									v	^			
					0	0									0	0			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					100	40				18 YEARS					120	30			
					v	^									v	^			
			620	<			<	530					200	<			<	130	
			150	>			>	150					590	>			>	650	
					v	^									v	^			
					0	0									0	0			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					590	550									910	450			
					v	^									v	^			
			1550	<			<	1800					1800	<			<	1800	
			1310	>			>	1470					2040	>			>	2370	
					v	^									v	^			
					150	0									180	0			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					10	0				2 YEARS					10	0			
					v	^									v	^			
			70	<			<	60					20	<			<	10	
			20	>			>	20					70	>			>	70	
					v	^									v	^			
					0	0									0	0			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					500	510				2024					800	420			
					v	^									v	^			
			1000	<	IN =	3010	<	1330					1620	<	IN =	4000	<	1680	
			1180	>	OUT =	3000	>	1340					1520	>	OUT =	4010	>	1790	
					v	^									v	^			
					150	0									180	0			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					500	510				2024					800	420			
					v	^									v	^			
			1000	<	IN =	3010	<	1330					1620	<	IN =	4000	<	1680	
			1180	>	OUT =	3000	>	1340					1520	>	OUT =	4010	>	1790	
					v	^									v	^			
					150	0									180	0			
ADT BY LEG:										ADT BY LEG:									
2040					16,000					2040					16,000				
					N										N				
			45,300	W	LEG	E		51,000					45,300	W	LEG	E		51,000	
					S										S				
					0										0				
ADT BY LEG:										ADT BY LEG:									
2024					14,100					2024					14,100				
					N										N				
			36,200	W	LEG	E		42,000					36,200	W	LEG	E		42,000	
					S										S				
					0										0				

I-15 SB Ramps (NS) / Main Street (EW) - #4

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**150**		RIGHT	**0**	OUT ...	**180**
SOUTH	LEFT	**308**	NORTH LEG		SOUTH	LEFT	**443**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**590**	BOUND	THRU	**0**	IN ...	**910**
	RIGHT	**177**	OUT ...	**550**		RIGHT	**351**	OUT ...	**450**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**1,009**	IN ...	**1,310**	BOUND	THRU	**1,272**	IN ...	**2,040**
	RIGHT	**153**	OUT ...	**1,550**		RIGHT	**178**	OUT ...	**1,800**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**756**	IN ...	**1,800**	BOUND	THRU	**1,253**	IN ...	**1,800**
	RIGHT	**511**	OUT ...	**1,470**		RIGHT	**418**	OUT ...	**2,370**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**0**	**0**	RATIO **7.3%**	BOUND	THRU	**0**	**0**	RATIO **8.6%**	
	RIGHT	**0**	**0**	ADT 16,000		RIGHT	**0**	**0**	ADT 16,000	
SOUTH	LEFT	**308**	**339**	SOUTH LEG	SOUTH	LEFT	**443**	**496**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**	
	RIGHT	**177**	**274**	ADT 0		RIGHT	**351**	**423**	ADT 0	
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**1,009**	**1,152**	RATIO **6.5%**	BOUND	THRU	**1,272**	**1,874**	RATIO **8.3%**	
	RIGHT	**153**	**168**	ADT 51,000		RIGHT	**178**	**196**	ADT 51,000	
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**756**	**1,276**	RATIO **6.3%**	BOUND	THRU	**1,253**	**1,378**	RATIO **8.5%**	
	RIGHT	**511**	**562**	ADT 45,300		RIGHT	**418**	**460**	ADT 45,300	

I-15 NB Ramps (NS) / Main Street (EW) - #5

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
		0	^			^	394	
		886	>			<	894	
		251	v			v	0	
			<	^	>			
			54	1	293			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	395			
				v	^			
		948	<	IN =	2773	<	1288	
		1137	>	OUT =	2773	>	1179	
				v	^			
				251	348			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
		0	^			^	67	
		130	>			<	209	
		52	v			v	0	
			<	^	>			
			28	2	118			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
		0	^			^	461	
		1016	>			<	1103	
		303	v			v	0	
			<	^	>			
			82	3	411			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	721			
				v	^			
		3607	<	IN =	6597	<	4102	
		1401	>	OUT =	6597	>	2269	
				v	^			
				0	1094			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	11			
				v	^			
		107	<	IN =	212	<	104	
		19	>	OUT =	212	>	94	
				v	^			
				0	89			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	278			
				v	^			
		1406	<	IN =	2577	<	1593	
		539	>	OUT =	2577	>	894	
				v	^			
				0	445			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	1086			
				v	^			
		5408	<	IN =	9242	<	5912	
		2132	>	OUT =	9243	>	2749	
				v	^			
				0	1198			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	30			
				v	^			
		142	<	IN =	342	<	139	
		60	>	OUT =	342	>	170	
				v	^			
				0	143			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	423			
				v	^			
		2102	<	IN =	3626	<	2293	
		830	>	OUT =	3626	>	1101	
				v	^			
				0	503			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	145			
				v	^			
		696	<			<	699	
		291	>			>	208	
				v	^			
				0	58			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
		0	^			^	365	
		1332	>			<	1366	
		198	v			v	0	
			<	^	>			
			176	4	641			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	369			
				v	^			
		1542	<	IN =	4082	<	1731	
		1530	>	OUT =	4082	>	1973	
				v	^			
				198	821			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
		0	^			^	39	
		116	>			<	163	
		27	v			v	0	
			<	^	>			
			14	0	131			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
		0	^			^	404	
		1448	>			<	1529	
		225	v			v	0	
			<	^	>			
			190	4	772			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	816			
				v	^			
		5050	<	IN =	11535	<	4220	
		2765	>	OUT =	11535	>	5669	
				v	^			
				0	4550			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	6			
				v	^			
		155	<	IN =	282	<	129	
		30	>	OUT =	281	>	120	
				v	^			
				0	123			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	230			
				v	^			
		1453	<	IN =	3300	<	1214	
		782	>	OUT =	3300	>	1617	
				v	^			
				0	1305			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	1576			
				v	^			
		5604	<	IN =	15238	<	5222	
		5854	>	OUT =	15237	>	8057	
				v	^			
				0	4162			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	18			
				v	^			
		230	<	IN =	408	<	204	
		71	>	OUT =	409	>	161	
				v	^			
				0	133			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	446			
				v	^			
		1627	<	IN =	4369	<	1513	
		1657	>	OUT =	4369	>	2296	
				v	^			
				0	1199			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	216			
				v	^			
		174	<			<	299	
		875	>			>	679	
				v	^			
				0	-106			

I-15 NB Ramps (NS) / Main Street (EW) - #5

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					0	150				10 MINIMUM GROWTH %					0	220			
					v	^									v	^			
			700	<	IN =	1050	<	700					170	<	IN =	1190	<	300	
			290	>	OUT =	1070	>	210					880	>	OUT =	1070	>	680	
					v	^									v	^			
					10	60									0	10			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					0	110				18 YEARS					0	170			
					v	^									v	^			
			530	<			<	530					130	<			<	230	
			220	>			>	160					660	>			>	510	
					v	^									v	^			
					10	50									0	10			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					0	570									0	580			
					v	^									v	^			
			1720	<			<	2090					1850	<			<	2160	
			1540	>			>	1590					2330	>			>	2730	
					v	^									v	^			
					310	550									230	980			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					0	10				2 YEARS					0	20			
					v	^									v	^			
			60	<			<	60					10	<			<	30	
			20	>			>	20					70	>			>	60	
					v	^									v	^			
					0	10									0	0			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					0	470				2024					0	430			
					v	^									v	^			
			1250	<	IN =	3470	<	1620					1730	<	IN =	4670	<	1960	
			1340	>	OUT =	3470	>	1450					1740	>	OUT =	4670	>	2280	
					v	^									v	^			
					300	510									230	970			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					0	470				2024					0	430			
					v	^									v	^			
			1250	<	IN =	3470	<	1620					1730	<	IN =	4670	<	1960	
			1340	>	OUT =	3470	>	1450					1740	>	OUT =	4670	>	2280	
					v	^									v	^			
					300	510									230	970			
ADT BY LEG:										ADT BY LEG:									
2040					6,500					2040					6,500				
					N										N				
			49,600	W	LEG	E		59,200					49,600	W	LEG	E		59,200	
					S										S				
					15,100										15,100				
ADT BY LEG:										ADT BY LEG:									
2024					4,900					2024					4,900				
					N										N				
			40,200	W	LEG	E		49,100					40,200	W	LEG	E		49,100	
					S										S				
					13,900										13,900				

I-15 NB Ramps (NS) / Main Street (EW) - #5

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**82**	SOUTH LEG		NORTH	LEFT	**190**	SOUTH LEG	
BOUND	THRU	**3**	IN ...	**550**	BOUND	THRU	**4**	IN ...	**980**
	RIGHT	**411**	OUT ...	**310**		RIGHT	**772**	OUT ...	**230**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**570**		RIGHT	**0**	OUT ...	**580**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**1,016**	IN ...	**1,540**	BOUND	THRU	**1,448**	IN ...	**2,330**
	RIGHT	**303**	OUT ...	**1,720**		RIGHT	**225**	OUT ...	**1,850**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**1,103**	IN ...	**2,090**	BOUND	THRU	**1,529**	IN ...	**2,160**
	RIGHT	**461**	OUT ...	**1,590**		RIGHT	**404**	OUT ...	**2,730**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**82**	**137**	NORTH LEG		NORTH	LEFT	**190**	**245**	NORTH LEG	
BOUND	THRU	**3**	**4**	RATIO	**8.8%**	BOUND	THRU	**4**	**7**	RATIO	**8.9%**
	RIGHT	**411**	**452**	ADT	6,500		RIGHT	**772**	**849**	ADT	6,500
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**6.1%**	BOUND	THRU	**0**	**0**	RATIO	**8.9%**
	RIGHT	**0**	**0**	ADT	15,100		RIGHT	**0**	**0**	ADT	15,100
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**1,016**	**1,189**	RATIO	**6.4%**	BOUND	THRU	**1,448**	**2,024**	RATIO	**8.7%**
	RIGHT	**303**	**333**	ADT	59,200		RIGHT	**225**	**248**	ADT	59,200
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**1,103**	**1,583**	RATIO	**6.5%**	BOUND	THRU	**1,529**	**1,682**	RATIO	**8.5%**
	RIGHT	**461**	**566**	ADT	49,600		RIGHT	**404**	**573**	ADT	49,600



GANDDINI GROUP INC.

714.795.3100 | ganddini.com

Appendix L – Trip Generation Comparison Analysis

September 6, 2023

Mr. Ramin Namvar
RACHAMIN 5, LLC
6001 East Slauson Avenue
Commerce, California 90040

RE: Amargosa and Palmeto High-Cube Warehouse Truck Trip Generation Comparison Analysis
Project No.: 19522

Dear Mr. Namvar:

Ganddini Group, Inc. is pleased to provide this Truck Trip Generation Comparison Analysis for the proposed Amargosa and Palmeto High-Cube Warehouse Project. The purpose of this trip generation comparison analysis is to evaluate the change in truck trip generation that can be expected between the proposed project and an alternative land use consisting of commercial retail. This Truck Trip Generation Comparison Analysis supplements the Amargosa and *Palmetto High-Cube Warehouse Traffic Impact Analysis* (Ganddini Group, Inc., August 18, 2022). We trust the findings of this analysis will aid you and the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The project site is currently undeveloped. Figure 1 illustrates the project location map.

The 30.52-acre project site is proposed to include a 499,850 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 499,700 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE *Trip Generation Manual* and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD).

As shown in Table 1, the proposed project is forecast to generate approximately 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

ALTERNATIVE LAND USE DETERMINATION

To determine the truck trips generated for a comparative commercial retail development, juxtaposed to the proposed industrial project, existing commercial retail developments near the project site were considered for analysis. It was determined that the Dunia Plaza development located approximately 2.5 miles northeast of the project along Amargosa Road south of Bear Valley Road provides the ideal location. This shopping center provides various commercial retail land uses, has driveways that allow for the ability to conduct project specific trip generation without interaction with other land uses, and has a total building square footage near the 500,000 square foot proposed project square footage.

It should be noted that this commercial retail development, like the proposed development, is also located along Amargosa Road between Bear Valley Road to the north and Main Street to the south.

Figure 3 shows the commercial retail development that was analyzed. This includes Dunia Plaza, Restaurant Row, and Cracker Barrel Old Country Store. The 16 driveway locations that provide access to/from the commercial retail development are depicted in Figure 3.

The Dunia Plaza development is 601,781 square feet. The Restaurant Row development is 14,750 square feet with Cracker Barrel Old Country Store providing an additional 9,113 square feet. The commercial retail development is a combined 625,644 square feet. Project square footage information for Dunia Plaza was provide by GVD Commercial Properties, Inc. (project management company for Dunia Plaza). Restaurant Row square footage was provided through the City of Victorville Planning Commission Staff Report (September 14, 2016) for PLN16-00014 with the Cracker Barrel Old Country Store square footage provided via LoopNet. Attachment A includes this information.

TRIP GENERATION SURVEY FOR THE EXISTING COMMERCIAL DEVELOPMENT

Existing volumes are based upon 24-hour roadway segment counts separating passenger cars and trucks by axle obtained on Tuesday, August 15, 2023 during typical weekday conditions when schools were in session. The weekday AM peak period was counted between 7:00 AM and 9:00 AM and the weekday PM peak period was counted between 4:00 PM and 6:00 PM; these periods generally capture the peak times for commuter traffic when the roadway system is typically experiencing peak demand. The actual peak hour within each two-hour count period is determined based on the sum of the four consecutive 15-minute periods with the highest total volume. Thus, the weekday PM peak hour may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest total volume. Attachment B includes the traffic counts.

Table 2 shows the inbound traffic volumes combined for all 16 driveways and Table 3 shows the outbound traffic volumes combined for all 16 driveways. Table 4 shows the total inbound and outbound traffic volumes combined for all 16 driveways.

ALTERNATIVE LAND USE TRIP GENERATION

Table 5 shows the alternative land use (commercial retail) trip generation based on the traffic volume counts (Tables B-1 to Table B-32 in Attachment B) for 625,644 square feet of commercial retail use.

As shown in Table 5, the alternative (commercial retail) land use currently generates a total of approximately 33,057 daily trips, including 1,182 trips during the AM peak hour and 2,643 trips during the PM peak hour.

As also shown in Table 5, the alternative (commercial retail) land use currently generates a total of approximately 34,145 PCE daily trips, including 1,262 PCE trips during the AM peak hour and 2,691 trips during the PM peak hour.

Table 5 also shows the number of daily, AM peak hour, and PM peak hour truck volumes. The alternative (commercial retail) land use currently generates a total of approximately 1,093 daily truck trips, including 67 truck trips during the AM peak hour and 49 truck trips during the PM peak hour.

ALTERNATIVE LAND USE TRIP GENERATION WITH COMPARATIVE SQUARE FOOTAGE

Table 6 shows the alternative land use (commercial retail) trip generation based on the trip generation rates established through the existing traffic count surveys (see Table 37) for the commercial retail development selected for analysis, for a comparative 499,850 square foot commercial retail development.

As shown in Table 6, the alternative (499,850 square feet of commercial retail) land use is projected to generate a total of approximately 26,410 daily trips, including 944 trips during the AM peak hour and 2,112 trips during the PM peak hour.

As also shown in Table 6, the alternative (499,850 square feet of commercial retail) land use is projected to generate a total of approximately 27,280 PCE daily trips, including 1,007 PCE trips during the AM peak hour and 2,149 trips during the PM peak hour.

Table 6 also shows the number of daily, AM peak hour, and PM peak hour truck volumes. The alternative (499,850 square feet of commercial retail) land use is projected to generate a total of approximately 873 daily truck trips, including 54 truck trips during the AM peak hour and 39 truck trips during the PM peak hour.

TRIP GENERATION COMPARISON

Table 7 shows the difference in project trip generation between the proposed project and the alternative (499,850 square feet of commercial retail) land use. As shown in Table 7, the proposed project is forecast to generate approximately 25,505 fewer daily trips compared to a shopping center land use of equivalent size, including 870 fewer trips during the AM peak hour and 2,035 fewer trips during the PM peak hour.

As also shown in Table 7, the proposed project is forecast to generate approximately 758 fewer daily truck trips compared to a shopping center land use of equivalent size, including 44 fewer truck trips during the AM peak hour and 37 fewer truck trips during the PM peak hour. Therefore, the proposed project is forecast to generate a 659% reduction of daily truck trips compared to a shopping center land use of equivalent size, including a 435% reduction in truck trips during the AM peak hour and a 1,857% reduction in truck trips during the PM peak hour.

Mr. Ramin Namvar
RACHAMIN 5, LLC
September 6, 2023

CONCLUSION

Based on the trip generation comparison analysis, the proposed project consisting of a 499,850 square foot high-cube fulfillment center warehouse building is forecast to generate substantially fewer truck trips (up to 659% fewer daily truck trips) compared to an alternative land use composed of 499,850 square feet of commercial retail.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
Bryan Crawford | Senior Associate
Giancarlo Ganddini, PE, PTP | Principal



Table 1
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.850 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			Daily
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet
(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
(3) PCE = Passenger Car Equivalent
(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 2
Driveways Combined Total (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	8	0	0	0	0	0	8	12:00 PM - 12:15 PM	345	5	1	2	0	2	355
12:15 AM - 12:30 AM	17	0	0	0	0	0	17	12:15 PM - 12:30 PM	326	10	2	0	0	2	340
12:30 AM - 12:45 AM	12	1	0	0	0	0	13	12:30 PM - 12:45 PM	346	7	1	2	0	1	357
12:45 AM - 1:00 AM	8	0	0	2	0	0	10	12:45 PM - 1:00 PM	296	6	0	1	0	0	303
1:00 AM - 1:15 AM	8	1	0	0	0	0	9	1:00 PM - 1:15 PM	289	7	0	0	0	2	298
1:15 AM - 1:30 AM	13	0	0	1	0	0	14	1:15 PM - 1:30 PM	299	8	0	1	2	3	313
1:30 AM - 1:45 AM	4	0	0	1	0	0	5	1:30 PM - 1:45 PM	286	8	1	6	1	0	302
1:45 AM - 2:00 AM	6	1	0	1	0	0	8	1:45 PM - 2:00 PM	286	8	2	2	0	1	299
2:00 AM - 2:15 AM	3	0	0	0	0	0	3	2:00 PM - 2:15 PM	244	9	0	2	0	2	257
2:15 AM - 2:30 AM	4	0	0	0	0	0	4	2:15 PM - 2:30 PM	263	8	2	0	1	2	276
2:30 AM - 2:45 AM	10	0	0	1	0	0	11	2:30 PM - 2:45 PM	267	8	3	2	0	1	281
2:45 AM - 3:00 AM	6	0	0	2	0	0	8	2:45 PM - 3:00 PM	304	7	2	2	0	0	315
3:00 AM - 3:15 AM	8	0	0	0	0	0	8	3:00 PM - 3:15 PM	265	6	0	0	0	1	272
3:15 AM - 3:30 AM	9	3	0	0	0	0	12	3:15 PM - 3:30 PM	317	2	0	0	1	2	322
3:30 AM - 3:45 AM	14	2	0	1	0	0	17	3:30 PM - 3:45 PM	318	5	0	0	0	2	325
3:45 AM - 4:00 AM	20	0	0	0	0	0	20	3:45 PM - 4:00 PM	325	5	1	1	0	1	333
4:00 AM - 4:15 AM	11	1	0	0	0	0	12	4:00 PM - 4:15 PM	301	4	0	1	0	1	307
4:15 AM - 4:30 AM	15	1	0	1	0	0	17	4:15 PM - 4:30 PM	271	3	1	2	0	1	278
4:30 AM - 4:45 AM	30	3	0	0	0	0	33	4:30 PM - 4:45 PM	317	4	1	2	0	1	325
4:45 AM - 5:00 AM	56	0	0	0	0	0	56	4:45 PM - 5:00 PM	365	4	0	0	0	2	371
5:00 AM - 5:15 AM	28	7	0	0	0	0	35	5:00 PM - 5:15 PM	318	3	0	0	0	2	323
5:15 AM - 5:30 AM	26	3	0	1	0	0	30	5:15 PM - 5:30 PM	341	2	0	1	0	0	344
5:30 AM - 5:45 AM	29	4	0	0	0	0	33	5:30 PM - 5:45 PM	294	5	0	1	0	0	300
5:45 AM - 6:00 AM	52	2	0	0	0	0	54	5:45 PM - 6:00 PM	327	4	0	1	1	3	336
6:00 AM - 6:15 AM	58	1	1	1	0	1	62	6:00 PM - 6:15 PM	296	4	1	1	0	0	302
6:15 AM - 6:30 AM	60	3	1	0	0	0	64	6:15 PM - 6:30 PM	305	1	0	0	0	1	307
6:30 AM - 6:45 AM	79	4	1	0	0	0	84	6:30 PM - 6:45 PM	269	1	0	1	0	0	271
6:45 AM - 7:00 AM	96	5	2	1	0	1	105	6:45 PM - 7:00 PM	306	1	1	2	0	1	311
7:00 AM - 7:15 AM	89	5	2	3	1	1	101	7:00 PM - 7:15 PM	263	4	0	0	0	0	267
7:15 AM - 7:30 AM	110	4	0	2	0	0	116	7:15 PM - 7:30 PM	249	1	0	0	0	1	251
7:30 AM - 7:45 AM	107	3	1	0	0	0	111	7:30 PM - 7:45 PM	252	0	0	1	0	0	253
7:45 AM - 8:00 AM	126	6	0	0	0	1	133	7:45 PM - 8:00 PM	222	1	0	1	0	0	224
8:00 AM - 8:15 AM	133	5	0	5	0	1	144	8:00 PM - 8:15 PM	218	3	0	1	0	1	223
8:15 AM - 8:30 AM	151	4	1	4	0	0	160	8:15 PM - 8:30 PM	190	1	0	1	0	1	193
8:30 AM - 8:45 AM	185	4	0	2	0	0	191	8:30 PM - 8:45 PM	155	1	0	3	0	0	159
8:45 AM - 9:00 AM	206	4	2	3	0	1	216	8:45 PM - 9:00 PM	159	0	0	0	0	0	159
9:00 AM - 9:15 AM	259	11	5	4	0	2	281	9:00 PM - 9:15 PM	121	1	1	0	0	2	125
9:15 AM - 9:30 AM	225	10	1	2	0	1	239	9:15 PM - 9:30 PM	116	0	0	1	0	0	117
9:30 AM - 9:45 AM	217	5	0	1	1	1	225	9:30 PM - 9:45 PM	107	0	0	1	0	0	108
9:45 AM - 10:00 AM	252	8	0	1	0	0	261	9:45 PM - 10:00 PM	101	2	0	1	0	0	104
10:00 AM - 10:15 AM	264	6	1	1	0	2	274	10:00 PM - 10:15 PM	77	0	0	0	0	0	77
10:15 AM - 10:30 AM	284	5	1	1	0	1	292	10:15 PM - 10:30 PM	54	1	0	1	0	0	56
10:30 AM - 10:45 AM	278	4	1	1	0	1	285	10:30 PM - 10:45 PM	54	0	1	1	0	0	56
10:45 AM - 11:00 AM	279	12	2	1	0	2	296	10:45 PM - 11:00 PM	33	0	0	0	0	0	33
11:00 AM - 11:15 AM	319	3	0	0	0	3	325	11:00 PM - 11:15 PM	22	0	0	1	0	0	23
11:15 AM - 11:30 AM	287	5	1	3	0	1	297	11:15 PM - 11:30 PM	18	0	0	1	0	0	19
11:30 AM - 11:45 AM	292	9	2	2	0	1	306	11:30 PM - 11:45 PM	15	2	0	0	0	0	17
11:45 AM - 12:00 PM	309	5	0	2	0	1	317	11:45 PM - 12:00 AM	8	2	0	0	0	0	10
Total	5,062	160	25	51	2	22	5,322	Total	10,920	164	21	47	6	39	11,197
								Total AM + PM	15,982	324	46	98	8	61	16,519

Peak Hour															
8:00 AM - 9:00 AM	675	17	3	14	0	2	711	4:45 PM - 5:45 PM	1,318	14	0	2	0	4	1,338

Table 3
Driveways Combined Total (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	43	0	0	0	0	0	43	12:00 PM - 12:15 PM	280	3	1	0	0	3	287
12:15 AM - 12:30 AM	27	0	0	0	0	0	27	12:15 PM - 12:30 PM	330	11	0	1	0	2	344
12:30 AM - 12:45 AM	28	1	0	0	0	0	29	12:30 PM - 12:45 PM	328	4	1	2	0	1	336
12:45 AM - 1:00 AM	13	0	0	0	0	0	13	12:45 PM - 1:00 PM	328	6	0	3	0	0	337
1:00 AM - 1:15 AM	16	0	0	0	0	0	16	1:00 PM - 1:15 PM	327	12	1	1	0	1	342
1:15 AM - 1:30 AM	11	1	0	0	0	0	12	1:15 PM - 1:30 PM	326	4	0	1	0	3	334
1:30 AM - 1:45 AM	9	0	0	0	0	0	9	1:30 PM - 1:45 PM	313	9	2	3	1	1	329
1:45 AM - 2:00 AM	8	0	0	1	0	0	9	1:45 PM - 2:00 PM	304	7	1	2	0	0	314
2:00 AM - 2:15 AM	9	0	0	0	0	0	9	2:00 PM - 2:15 PM	288	12	1	3	1	2	307
2:15 AM - 2:30 AM	6	0	0	1	0	0	7	2:15 PM - 2:30 PM	299	11	1	3	1	3	318
2:30 AM - 2:45 AM	5	0	0	2	0	0	7	2:30 PM - 2:45 PM	274	4	1	1	0	1	281
2:45 AM - 3:00 AM	9	2	0	0	0	0	11	2:45 PM - 3:00 PM	287	9	2	1	0	0	299
3:00 AM - 3:15 AM	9	0	0	0	0	0	9	3:00 PM - 3:15 PM	294	9	2	2	0	1	308
3:15 AM - 3:30 AM	6	0	0	3	0	0	9	3:15 PM - 3:30 PM	289	4	0	0	0	2	295
3:30 AM - 3:45 AM	10	2	0	1	0	0	13	3:30 PM - 3:45 PM	294	5	3	2	0	2	306
3:45 AM - 4:00 AM	9	4	0	0	0	0	13	3:45 PM - 4:00 PM	303	8	0	0	0	0	311
4:00 AM - 4:15 AM	8	0	0	0	0	0	8	4:00 PM - 4:15 PM	298	3	2	0	0	2	305
4:15 AM - 4:30 AM	12	3	0	0	0	0	15	4:15 PM - 4:30 PM	296	6	0	1	0	1	304
4:30 AM - 4:45 AM	8	4	0	0	0	0	12	4:30 PM - 4:45 PM	276	4	1	2	1	1	285
4:45 AM - 5:00 AM	24	0	0	0	0	0	24	4:45 PM - 5:00 PM	325	4	1	0	0	2	332
5:00 AM - 5:15 AM	18	3	0	0	0	0	21	5:00 PM - 5:15 PM	322	6	0	2	1	2	333
5:15 AM - 5:30 AM	14	3	0	0	0	0	17	5:15 PM - 5:30 PM	319	3	0	2	0	0	324
5:30 AM - 5:45 AM	26	3	0	0	0	0	29	5:30 PM - 5:45 PM	310	6	0	0	0	0	316
5:45 AM - 6:00 AM	9	2	0	0	0	0	11	5:45 PM - 6:00 PM	335	6	0	0	0	1	342
6:00 AM - 6:15 AM	37	3	0	1	0	1	42	6:00 PM - 6:15 PM	333	7	0	0	0	2	342
6:15 AM - 6:30 AM	33	1	0	0	0	0	34	6:15 PM - 6:30 PM	302	2	1	0	0	1	306
6:30 AM - 6:45 AM	51	6	1	0	0	0	58	6:30 PM - 6:45 PM	306	0	0	0	0	0	306
6:45 AM - 7:00 AM	70	5	1	2	0	1	79	6:45 PM - 7:00 PM	316	2	0	0	0	1	319
7:00 AM - 7:15 AM	93	7	0	1	0	1	102	7:00 PM - 7:15 PM	296	3	0	0	0	0	299
7:15 AM - 7:30 AM	74	7	3	2	0	0	86	7:15 PM - 7:30 PM	273	0	1	3	0	1	278
7:30 AM - 7:45 AM	99	4	1	2	0	0	106	7:30 PM - 7:45 PM	263	3	0	2	0	0	268
7:45 AM - 8:00 AM	89	8	1	2	1	1	102	7:45 PM - 8:00 PM	248	3	0	1	0	0	252
8:00 AM - 8:15 AM	93	7	0	2	0	1	103	8:00 PM - 8:15 PM	281	2	0	0	0	1	284
8:15 AM - 8:30 AM	102	3	0	2	0	0	107	8:15 PM - 8:30 PM	264	0	0	1	0	1	266
8:30 AM - 8:45 AM	115	4	1	2	0	0	122	8:30 PM - 8:45 PM	241	1	0	1	0	0	243
8:45 AM - 9:00 AM	130	2	1	5	0	1	139	8:45 PM - 9:00 PM	219	0	0	0	0	0	219
9:00 AM - 9:15 AM	173	4	3	2	0	2	184	9:00 PM - 9:15 PM	183	2	0	2	0	2	189
9:15 AM - 9:30 AM	153	7	2	3	0	1	166	9:15 PM - 9:30 PM	174	1	0	0	0	0	175
9:30 AM - 9:45 AM	205	5	1	1	0	1	213	9:30 PM - 9:45 PM	161	0	0	1	0	0	162
9:45 AM - 10:00 AM	209	8	2	2	0	0	221	9:45 PM - 10:00 PM	111	0	0	0	0	0	111
10:00 AM - 10:15 AM	225	8	0	0	0	1	234	10:00 PM - 10:15 PM	144	1	0	0	0	0	145
10:15 AM - 10:30 AM	183	5	1	2	0	1	192	10:15 PM - 10:30 PM	95	0	0	2	0	0	97
10:30 AM - 10:45 AM	246	6	1	1	0	1	255	10:30 PM - 10:45 PM	76	0	0	1	0	0	77
10:45 AM - 11:00 AM	258	10	3	2	1	2	276	10:45 PM - 11:00 PM	85	1	0	1	0	0	87
11:00 AM - 11:15 AM	281	5	2	0	0	2	290	11:00 PM - 11:15 PM	73	0	0	0	0	0	73
11:15 AM - 11:30 AM	271	3	1	0	0	0	275	11:15 PM - 11:30 PM	48	1	1	0	0	0	50
11:30 AM - 11:45 AM	280	2	1	1	0	2	286	11:30 PM - 11:45 PM	27	1	0	1	0	0	29
11:45 AM - 12:00 PM	276	11	0	3	0	2	292	11:45 PM - 12:00 AM	35	0	0	0	0	0	35
Total	4,083	159	26	46	2	21	4,337	Total	11,899	186	23	48	5	40	12,201
								Total AM + PM	15,982	345	49	94	7	61	16,538

Peak Hour															
8:00 AM - 9:00 AM	440	16	2	11	0	2	471	4:45 PM - 5:45 PM	1,276	19	1	4	1	4	1,305

Table 4
Driveways Combined Total (Tuesday, August 15, 2023) - Inbound + Outbound

Inbound + Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	51	0	0	0	0	0	51	12:00 PM - 12:15 PM	625	8	2	2	0	5	642
12:15 AM - 12:30 AM	44	0	0	0	0	0	44	12:15 PM - 12:30 PM	656	21	2	1	0	4	684
12:30 AM - 12:45 AM	40	2	0	0	0	0	42	12:30 PM - 12:45 PM	674	11	2	4	0	2	693
12:45 AM - 1:00 AM	21	0	0	2	0	0	23	12:45 PM - 1:00 PM	624	12	0	4	0	0	640
1:00 AM - 1:15 AM	24	1	0	0	0	0	25	1:00 PM - 1:15 PM	616	19	1	1	0	3	640
1:15 AM - 1:30 AM	24	1	0	1	0	0	26	1:15 PM - 1:30 PM	625	12	0	2	2	6	647
1:30 AM - 1:45 AM	13	0	0	1	0	0	14	1:30 PM - 1:45 PM	599	17	3	9	2	1	631
1:45 AM - 2:00 AM	14	1	0	2	0	0	17	1:45 PM - 2:00 PM	590	15	3	4	0	1	613
2:00 AM - 2:15 AM	12	0	0	0	0	0	12	2:00 PM - 2:15 PM	532	21	1	5	1	4	564
2:15 AM - 2:30 AM	10	0	0	1	0	0	11	2:15 PM - 2:30 PM	562	19	3	3	2	5	594
2:30 AM - 2:45 AM	15	0	0	3	0	0	18	2:30 PM - 2:45 PM	541	12	4	3	0	2	562
2:45 AM - 3:00 AM	15	2	0	2	0	0	19	2:45 PM - 3:00 PM	591	16	4	3	0	0	614
3:00 AM - 3:15 AM	17	0	0	0	0	0	17	3:00 PM - 3:15 PM	559	15	2	2	0	2	580
3:15 AM - 3:30 AM	15	3	0	3	0	0	21	3:15 PM - 3:30 PM	606	6	0	0	1	4	617
3:30 AM - 3:45 AM	24	4	0	2	0	0	30	3:30 PM - 3:45 PM	612	10	3	2	0	4	631
3:45 AM - 4:00 AM	29	4	0	0	0	0	33	3:45 PM - 4:00 PM	628	13	1	1	0	1	644
4:00 AM - 4:15 AM	19	1	0	0	0	0	20	4:00 PM - 4:15 PM	599	7	2	1	0	3	612
4:15 AM - 4:30 AM	27	4	0	1	0	0	32	4:15 PM - 4:30 PM	567	9	1	3	0	2	582
4:30 AM - 4:45 AM	38	7	0	0	0	0	45	4:30 PM - 4:45 PM	593	8	2	4	1	2	610
4:45 AM - 5:00 AM	80	0	0	0	0	0	80	4:45 PM - 5:00 PM	690	8	1	0	0	4	703
5:00 AM - 5:15 AM	46	10	0	0	0	0	56	5:00 PM - 5:15 PM	640	9	0	2	1	4	656
5:15 AM - 5:30 AM	40	6	0	1	0	0	47	5:15 PM - 5:30 PM	660	5	0	3	0	0	668
5:30 AM - 5:45 AM	55	7	0	0	0	0	62	5:30 PM - 5:45 PM	604	11	0	1	0	0	616
5:45 AM - 6:00 AM	61	4	0	0	0	0	65	5:45 PM - 6:00 PM	662	10	0	1	1	4	678
6:00 AM - 6:15 AM	95	4	1	2	0	2	104	6:00 PM - 6:15 PM	629	11	1	1	0	2	644
6:15 AM - 6:30 AM	93	4	1	0	0	0	98	6:15 PM - 6:30 PM	607	3	1	0	0	2	613
6:30 AM - 6:45 AM	130	10	2	0	0	0	142	6:30 PM - 6:45 PM	575	1	0	1	0	0	577
6:45 AM - 7:00 AM	166	10	3	3	0	2	184	6:45 PM - 7:00 PM	622	3	1	2	0	2	630
7:00 AM - 7:15 AM	182	12	2	4	1	2	203	7:00 PM - 7:15 PM	559	7	0	0	0	0	566
7:15 AM - 7:30 AM	184	11	3	4	0	0	202	7:15 PM - 7:30 PM	522	1	1	3	0	2	529
7:30 AM - 7:45 AM	206	7	2	2	0	0	217	7:30 PM - 7:45 PM	515	3	0	3	0	0	521
7:45 AM - 8:00 AM	215	14	1	2	1	2	235	7:45 PM - 8:00 PM	470	4	0	2	0	0	476
8:00 AM - 8:15 AM	226	12	0	7	0	2	247	8:00 PM - 8:15 PM	499	5	0	1	0	2	507
8:15 AM - 8:30 AM	253	7	1	6	0	0	267	8:15 PM - 8:30 PM	454	1	0	2	0	2	459
8:30 AM - 8:45 AM	300	8	1	4	0	0	313	8:30 PM - 8:45 PM	396	2	0	4	0	0	402
8:45 AM - 9:00 AM	336	6	3	8	0	2	355	8:45 PM - 9:00 PM	378	0	0	0	0	0	378
9:00 AM - 9:15 AM	432	15	8	6	0	4	465	9:00 PM - 9:15 PM	304	3	1	2	0	4	314
9:15 AM - 9:30 AM	378	17	3	5	0	2	405	9:15 PM - 9:30 PM	290	1	0	1	0	0	292
9:30 AM - 9:45 AM	422	10	1	2	1	2	438	9:30 PM - 9:45 PM	268	0	0	2	0	0	270
9:45 AM - 10:00 AM	461	16	2	3	0	0	482	9:45 PM - 10:00 PM	212	2	0	1	0	0	215
10:00 AM - 10:15 AM	489	14	1	1	0	3	508	10:00 PM - 10:15 PM	221	1	0	0	0	0	222
10:15 AM - 10:30 AM	467	10	2	3	0	2	484	10:15 PM - 10:30 PM	149	1	0	3	0	0	153
10:30 AM - 10:45 AM	524	10	2	2	0	2	540	10:30 PM - 10:45 PM	130	0	1	2	0	0	133
10:45 AM - 11:00 AM	537	22	5	3	1	4	572	10:45 PM - 11:00 PM	118	1	0	1	0	0	120
11:00 AM - 11:15 AM	600	8	2	0	0	5	615	11:00 PM - 11:15 PM	95	0	0	1	0	0	96
11:15 AM - 11:30 AM	558	8	2	3	0	1	572	11:15 PM - 11:30 PM	66	1	1	1	0	0	69
11:30 AM - 11:45 AM	572	11	3	3	0	3	592	11:30 PM - 11:45 PM	42	3	0	1	0	0	46
11:45 AM - 12:00 PM	585	16	0	5	0	3	609	11:45 PM - 12:00 AM	43	2	0	0	0	0	45
Total	9,145	319	51	97	4	43	9,659	Total	22,819	350	44	95	11	79	23,398
								Total AM + PM	31,964	669	95	192	15	122	33,057

Peak Period															
Morning								Evening							
	Number of Vehicles								Number of Vehicles						
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
7:00 AM - 8:00 AM	787	44	8	12	2	4	857	4:00 PM - 5:00 PM	2,449	32	6	8	1	11	2,507
7:15 AM - 8:15 AM	831	44	6	15	1	4	901	4:15 PM - 5:15 PM	2,490	34	4	9	2	12	2,551
7:30 AM - 8:30 AM	900	40	4	17	1	4	966	4:30 PM - 5:30 PM	2,583	30	3	9	2	10	2,637
7:45 AM - 8:45 AM	994	41	3	19	1	4	1,062	4:45 PM - 5:45 PM	2,594	33	1	6	1	8	2,643
8:00 AM - 9:00 AM	1,115	33	5	25	0	4	1,182	5:00 PM - 6:00 PM	2,566	35	0	7	2	8	2,618
Peak Hour															
8:00 AM - 9:00 AM	1,115	33	5	25	0	4	1,182	4:45 PM - 5:45 PM	2,594	33	1	6	1	8	2,643

Table 5
Commercial Retail Surveyed Trip Generation

Land Use: Commercial Retail
Size: 625.644 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	Counts	60%	40%	1.889	51%	49%	4.224	52.837
Trucks Only	Counts	54%	46%	0.107	41%	59%	0.078	1.747
Passenger Car (94.3% AM, 98.1% PM, 96.7% Daily)		1.072	0.710	1.782	2.099	2.047	4.146	51.090
Truck (5.7% AM, 1.9% PM, 3.3% Daily)		0.058	0.050	0.107	0.032	0.046	0.078	1.747
Truck Mix:	Counts							
2-Axle Trucks (49.3% AM, 67.3% PM, 61.2% Daily)		0.028	0.024	0.053	0.022	0.031	0.053	1.069
3-Axle Trucks (7.5% AM, 2.0% PM, 8.7% Daily)		0.004	0.004	0.008	0.001	0.001	0.002	0.152
4+ Axle Trucks (43.3% AM, 30.6% PM, 30.1% Daily)		0.025	0.021	0.046	0.010	0.014	0.024	0.526

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	675	440	1,115	1,318	1,276	2,594	31,964
Trucks							
2-Axle Trucks	17	16	33	14	19	33	669
3-Axle Trucks	3	2	5	0	1	1	95
4+ Axle Trucks	16	13	29	6	9	15	329
Subtotal	36	31	67	20	29	49	1,093
Total Vehicle Trips Generated	**711**	**471**	**1,182**	**1,338**	**1,305**	**2,643**	**33,057**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	675	440	1,115	1,318	1,276	2,594	31,964
Trucks								
2-Axle Trucks	1.5	26	24	50	21	29	50	1,004
3-Axle Trucks	2.0	6	4	10	0	2	2	190
4+ Axle Trucks	3.0	48	39	87	18	27	45	987
Subtotal		80	67	147	39	58	97	2,181
Total PCE Trips Generated		**755**	**507**	**1,262**	**1,357**	**1,334**	**2,691**	**34,145**

Notes:
(1) TSF = Thousand Square Feet

(2) Traffic counts conducted at project driveways of commercial retail site.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 6
Commercial Retail Surveyed Trip Generation Comparative Square Footage

Land Use: Commercial Retail
Size: 499.850 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			Daily
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Rate
All Vehicles	Counts	60%	40%	1.889	51%	49%	4.224	52.837
Trucks Only	Counts	54%	46%	0.107	41%	59%	0.078	1.747
Passenger Car (94.3% AM, 98.1% PM, 96.7% Daily)		1.072	0.710	1.782	2.099	2.047	4.146	51.090
Truck (5.7% AM, 1.9% PM, 3.3% Daily)		0.058	0.050	0.107	0.032	0.046	0.078	1.747
Truck Mix:	Counts							
2-Axle Trucks (49.3% AM, 67.3% PM, 61.2% Daily)		0.028	0.024	0.053	0.022	0.031	0.053	1.069
3-Axle Trucks (7.5% AM, 2.0% PM, 8.7% Daily)		0.004	0.004	0.008	0.001	0.001	0.002	0.152
4+ Axle Trucks (43.3% AM, 30.6% PM, 30.1% Daily)		0.025	0.021	0.046	0.010	0.014	0.024	0.526

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	536	355	891	1,049	1,023	2,072	25,537
Trucks							
2-Axle Trucks	14	12	26	11	16	26	534
3-Axle Trucks	2	2	4	0	0	1	76
4+ Axle Trucks	12	11	23	5	7	12	263
Subtotal	29	25	54	16	23	39	873
Total Vehicle Trips Generated	**565**	**380**	**944**	**1,065**	**1,046**	**2,112**	**26,410**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	536	355	891	1,049	1,023	2,072	25,537
Trucks								
2-Axle Trucks	1.5	21	18	39	16	23	39	802
3-Axle Trucks	2.0	4	4	8	1	1	2	152
4+ Axle Trucks	3.0	37	32	69	15	21	36	789
Subtotal		62	54	116	32	45	77	1,743
Total PCE Trips Generated		**598**	**409**	**1,007**	**1,081**	**1,068**	**2,149**	**27,280**

Notes:
(1) TSF = Thousand Square Feet

(2) See Table 5

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 7
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	Daily
Project[1]							
- Passenger Cars	52	12	64	29	46	75	790
- Trucks	5	5	10	1	1	2	115
Total	57	17	74	30	47	77	905
Alternative Land Use[2]							
- Passenger Cars	536	355	891	1,049	1,023	2,072	25,537
- Trucks	29	25	54	16	23	39	873
Total	565	380	944	1,065	1,046	2,112	26,410
Difference in Passenger Cars	**-484**	**-343**	**-827**	**-1,020**	**-977**	**-1,997**	**-24,747**
	-930%	**-2,858%**	**-1,292%**	**-3,518%**	**-2,125%**	**-2,663%**	**-3,133%**
Difference in Trucks	**-24**	**-20**	**-44**	**-15**	**-22**	**-37**	**-758**
	-475%	**-395%**	**-435%**	**-1,498%**	**-2,217%**	**-1,857%**	**-659%**
Total Difference	**-508**	**-363**	**-870**	**-1,035**	**-999**	**-2,035**	**-25,505**
	-891%	**-2134%**	**-1176%**	**-3450%**	**-2,126%**	**-2,642%**	**-2,818%**

Notes:
(1) See Table 1.

(2) See Table 6.



Figure 1
Project Location Map

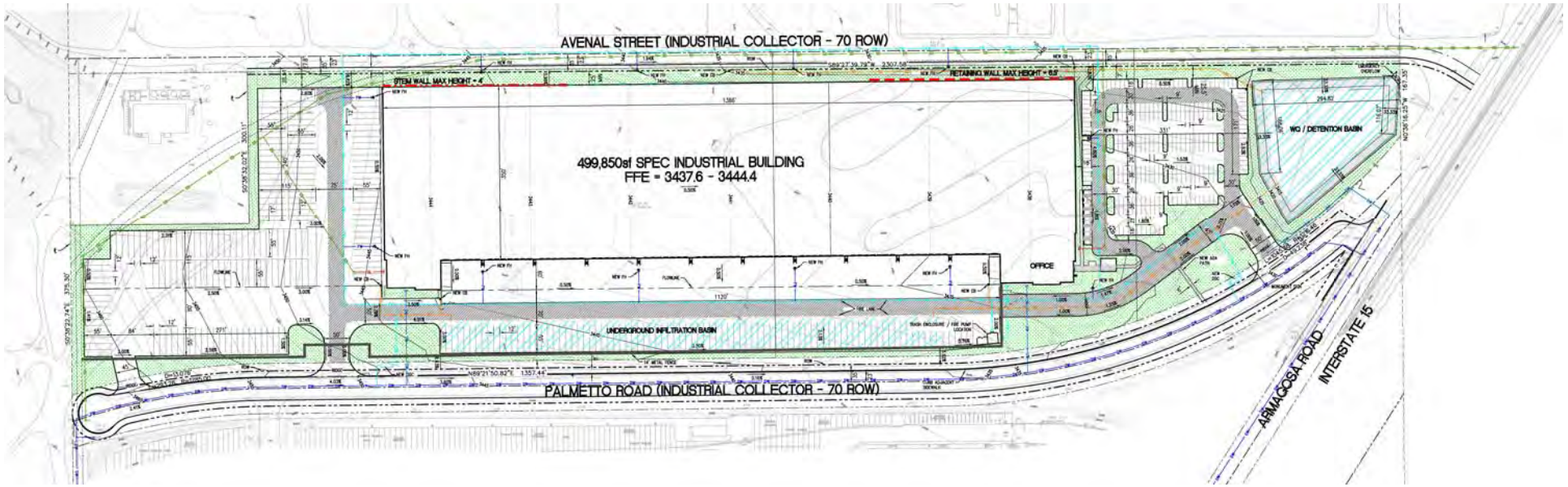


Figure 2
Site Plan



Legend
(#) Study Driveway

Figure 3
Commercial Retail Development

ATTACHMENT A

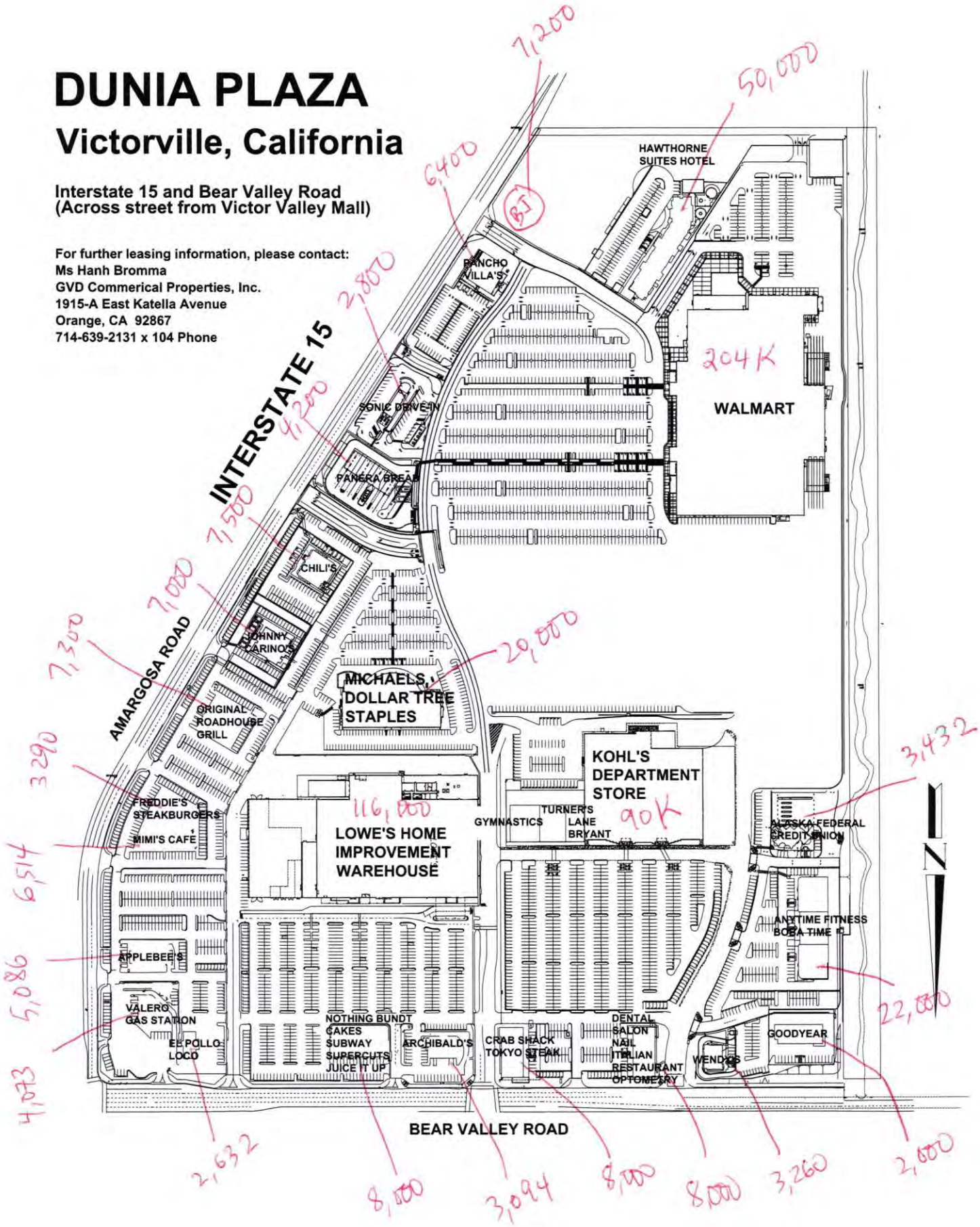
COMMERCIAL SITE INFORMATION

DUNIA PLAZA

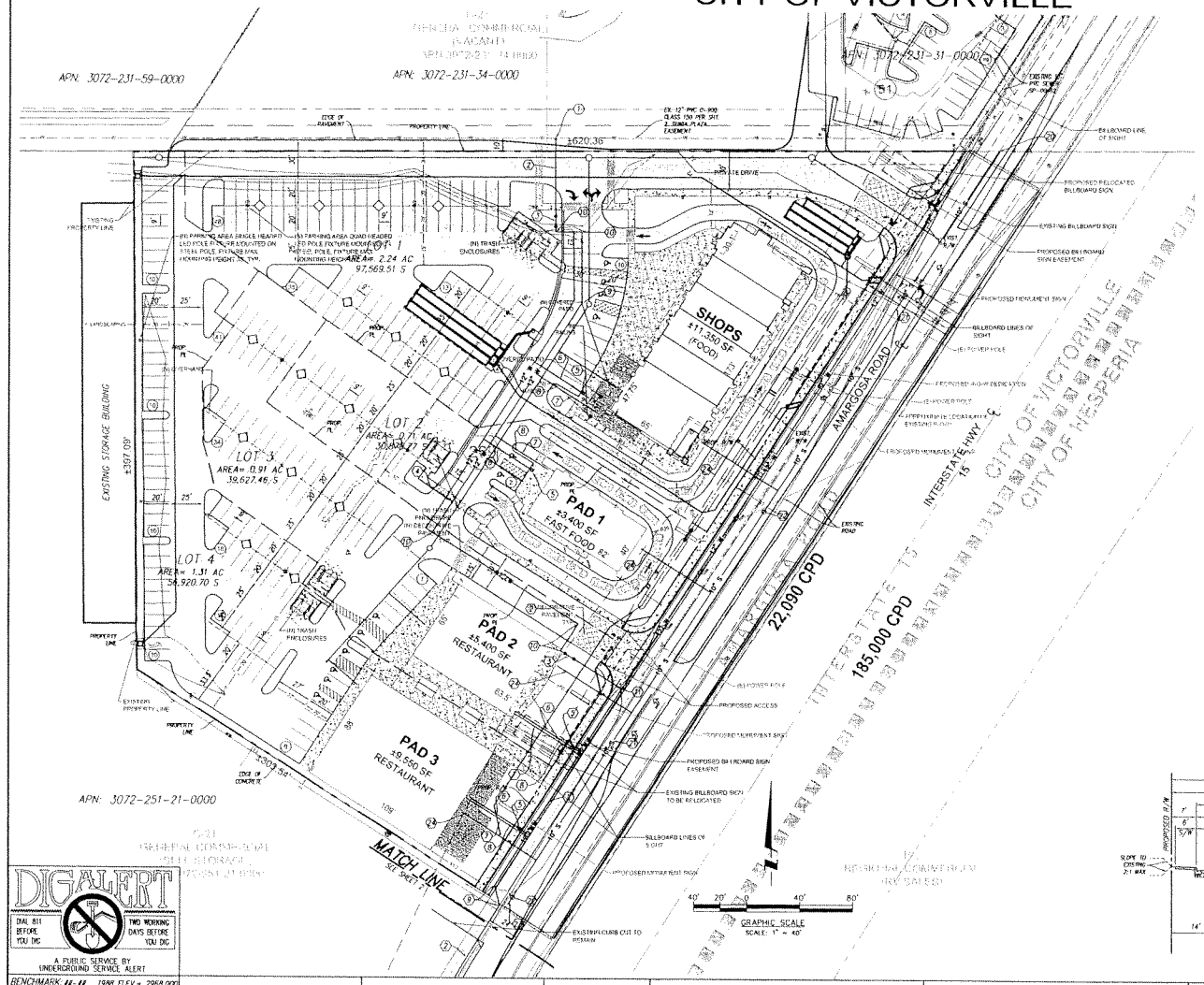
Victorville, California

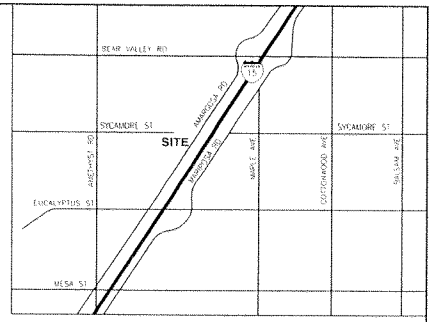
Interstate 15 and Bear Valley Road
(Across street from Victor Valley Mall)

For further leasing information, please contact:
Ms Hanh Bromma
GVD Commerical Properties, Inc.
1915-A East Katella Avenue
Orange, CA 92867
714-639-2131 x 104 Phone



CONCEPTUAL UTILITY PLAN
PARCEL MAP 19766
CITY OF VICTORVILLE





VICINITY MAP
SECTION 1 TOWNSHIP 4 NORTH RANGE 5 WEST
NOT TO SCALE

LEGEND

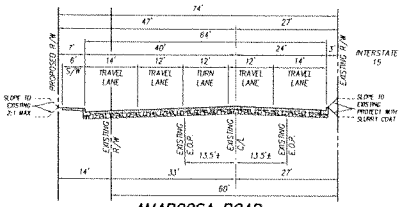
	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
	EXISTING CENTERLINE
	EXISTING EASEMENT
AC.	ACRES
S.F.	SQUARE FEET
C/L	CENTERLINE
R/W	RIGHT OF WAY
S/W	SIDEWALK
EXIST.	EXISTING
T.B.R.	TO BE REMOVED
O.D.E.	OFFER OF DEDICATION
PROP.	PROPOSED

WATER LINE CONSTRUCTION NOTES

1. INSTALL 12" SLEEVE X HOT TAP & VALVE
2. INSTALL 12" PVC C-900 CLASS 150
3. INSTALL 12" BACKFLOW PREVENTER
4. INSTALL FIRE HYDRANT ASSEMBLY
5. INSTALL 2" WATER METER
6. INSTALL 2" DOMESTIC WATER SERVICE
7. INSTALL 8" FIRE WATER LINE
8. INSTALL FDC
9. INSTALL 12" 45° BEND
10. INSTALL 12" 90° BEND
11. INSTALL 12" TEE
12. REMOVE EX. FLGD END CAP W/ THRUST BLOCK AND CONNECT

SEWER CONSTRUCTION NOTES

20. REMOVE CAP AND JOIN EX. 10" SEWER LINE
21. INSTALL 10" SEWER MAIN
22. CONSTRUCT SEWER MANHOLE PER
23. INSTALL 10" SEWER STUB AND CAP
24. INSTALL 6" SEWER LATERAL



OWNER/DEVELOPER

VANTAGECRE REAL ESTATE INVESTMENTS, LLC
4 CORPORATE PLAZA DRIVE, SUITE 210
NEWPORT BEACH, CA 92660
PHONE: (949) 631-6620
CONTACT: TOM ROBINSON

ENGINEER

PSOMAS
1500 IOWA AVENUE, SUITE 210
RIVERSIDE, CA 92507
PHONE: (951) 787-8421
CONTACT: FRANSICO CALDERON

LEGAL DESCRIPTION

PARCEL 2 OF PARCEL MAP NO. 8318, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 86, PAGE 78 OF PARCEL MAPS, SAN BERNARDINO COUNTY RECORDS.

FLOOD ZONE

NO FEMA FLOOD DESIGNATION - AREA NOT INCLUDED IN FLOOD MAP

UTILITY PROVIDERS

WATER AND SEWER: CITY OF VICTORVILLE	(760) 955-5001
ELECTRIC: SOUTHERN CALIFORNIA EDISON	(800) 655-4555
TELEPHONE: VERIZON	(800) 483-4090
GAS: SOUTHWEST GAS CORPORATION	(877) 860-6020
CABLE TV: CHARTER COMMUNICATIONS	(866) 499-8080

ZONING/LAND USE/GENERAL PLAN

EXISTING ZONING: C-2T (GENERAL COMMERCIAL, TRANSITIONAL)
EXISTING LAND USE: VACANT
PROPOSED ZONING: C-2T (GENERAL COMMERCIAL, TRANSITIONAL)
PROPOSED LAND USE: COMMERCIAL / RESTAURANT

ACREAGE

APN: 3072-251-22-0-000	5.38 ACRES
LOT A	0.27 ACRES
NET	5.16 ACRES
LOT 1	2.24 ACRES
LOT 2	0.71 ACRES
LOT 3	0.91 ACRES
LOT 4	1.31 ACRES

DIGALERT
DIAL 811 BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

BENCHMARK: II-II 1998 ELEV.= 2968.000
CITY OF VICTORVILLE
P.K. NAIL AND CITY ENGINEER TAG IN THE .....

PSOMAS
1500 IOWA AVENUE, SUITE 210
RIVERSIDE, CA 92507
(951) 787-8421 WWW.PSOMAS.COM

PREPARED BY: _____ R.C.E. NO. _____ DATE: _____

REVISIONS			
No.	Description	Date	Approved

CITY CASE NO. (to be assigned at plan submittal)

CITY OF VICTORVILLE
ENGINEERING DEPARTMENT
14343 Civic Drive, Victorville, CA 92392 (760) 955-5000

Approved By: _____
Brian W. Gengler, RCE C44730
City Engineer
DATE

CONCEPTUAL COMPOSITE UTILITY PLAN

PARCEL MAP 19766

HORIZ. SCALE: VERT. SCALE: J.N. TVAN0201100

SHEET 1 OF 1

LoopNet™ Log In Sign Up

This Retail Property is no longer advertised on LoopNet.com.

11612 Amargosa Rd
Victorville, CA 92392

Cracker Barrel | 13.5Y Corp. Ground Lease · Retail Property For Sale

Restaurants / California / Victorville /
11612 Amargosa Rd, Victorville, CA 92392



INVESTMENT HIGHLIGHTS

- Brand new 2018 Construction
- NNN Lease with 10% Increases every 5 years
- Southern California Freeway Location, Explosive Trade Area Growth
- Publicly Traded (NASDAQ: CBRL) Corporate Guaranty
- 15-Year Fee Interest Ground Lease - Most Secure Form of Ownership

PROPERTY FACTS

Property Type	**Retail**
Property Subtype	**Restaurant**
Building Size	**9,113 SF**
Building Class	**B**
Year Built	**2018**
Tenancy	**Single**
Building Height	**1 Story**
Building FAR	**0.09**
Land Acres	**2.22 AC**
Zoning	**GC**
Frontage	**216 FT on Amargosa Rd**

ABOUT 11612 AMARGOSA RD VICTORVILLE, CA 92392

Marcus and Millichap has been selected to exclusively represent the sale of Restaurant Row in Victorville, California, a portfolio of category leading national and regional restaurants. The subject property

consists of newly constructed prototypical Cracker Barrel restaurant consisting of 9,113 square feet sitting on an approximate 2.2 acre parcel of land.
The building was tastefully constructed with all of the rustic features Cracker Barrel Old Country Store restaurants are well known for, covered front porch with rocking chairs, brown paneled siding, metal roof and authentic Americana antiques. The offering is a 15 year corporate ground lease (fee interest), with publicly traded Cracker Barrel restaurant (Nasdaq:CBRL) with 10% rent increases every 5 years. This is southern California's first Cracker Barrel and the grand opening was an overwhelming success that generated a tremendous wait from loyal Cracker Barrel patrons. Cracker Barrel has a cult following throughout the country and this location is well positioned along Amorgosa Road and the I-15 freeway. Cracker Barrel Old Country Store, Inc. was established in 1969 in Lebanon, Tennessee. There are currently 640 locations throughout the U.S.
The real estate is well positioned in the trade located adjacent to the I-15 Freeway and Bear Valley Road on and off ramps. Fronting both Amargosa Road and the I-15 freeway the property has excellent identity and traffic

exposure.
The location is prime in the trade area as evidenced by the new development that includes a new 75 room Wyndham Hotel and resort, Super Walmart, Kohl's and Home Goods, TJ Max, 24 Hour Fitness currently under construction at the site. Additionally, a proposed 128 bed trauma center, medical office building, physician village, day care, spiritual care development with a hotel has been approved with all entitlements. This project is comprised of 98 acres along Amargosa Road between Bear Valley and Main Street just 2.8 miles from the subject property. The project part is of the St. Joseph / St. Mary Healthcare system. Restaurant Row is a synergistic mix of restaurants consisting of Starbucks Coffee, nectar juice bar, Which Wich Sandwiches, Pieology Pizza, Ono Hawaiian Barbeque, Café Rio Mexican Grill, Habit Burger and Bj's Pizza. Access points and drive aisles provide excellent ingress and egress from the Wyndham, Walmart and Kohl's for easy access to all of the restaurants. 76% of the leasable area (4 of 6 tenants) have corporate signature absolute net leases. The remaining two tenants are strong franchisees with excellent operational histories and personal rent

guarantees.
The investment provides annual rent growth with increasing cash flow and yield, protecting against inflation with a diversified base of strong restaurant tenants.
The Victor Valley includes the communities of Adelanto, Apple Valley, Hesperia, Lucerne Valley, Oak Hills, Phelan, Victorville and Wrightwood.
Victorville is the business hub of the area and draws consumers from well beyond its immediate area. It is the largest commercial center between San Bernardino and the Nevada border.
The city of Victorville is home to a large and diverse pool of workers and is home to 34 universities, colleges and technical schools providing an abundant supply of skilled labor.

TRANSPORTATION

COMMUTER RAIL

Fontana Commuter Rail (San Bernardino Line) METROLINK.	39 min drive	32.7 mi
Rialto Commuter Rail (San Bernardino Line) METROLINK.	43 min drive	34.4 mi
San Bernardino Commuter Rail (San Bernardino, Inland Empire-Orange	40 min drive	34.5 mi

COMMUTER RAIL

County Lines)		
Rancho Cucamonga Commuter Rail (San Bernardino Line)	43 min drive	36.9 mi
Upland Commuter Rail (San Bernardino Line)	51 min drive	43.8 mi

AIRPORT

Southern California Logistics Airport	19 min drive	12.1 mi
Ontario International Airport	48 min drive	40.8 mi

PROPERTY TAXES

Parcel Number	3072-251-41	Improvements Assessment	$2,444,940
Land Assessment	$3,017,160	Total Assessment	$5,462,100

YOU MAY ALSO LIKE



Multiple Locations - A...
$78,988,250



324-328 S Myrtle Ave - ...
$6,500,000

Listing ID: 14447975 **Date Created:** 11/20/2018 **Last Updated:**

Address: 11612 Amargosa Rd, Victorville, CA

More public record information on 11612 Amargosa Rd, Victorville, CA 92392

The Retail Property at 11612 Amargosa Rd, **Victorville**, CA **92392** is no longer being advertised on LoopNet.com. Contact the broker for information on availability.

NEARBY LISTINGS

17222 Bear Valley Rd, Victorville CA

17100 Bear Valley Rd, Victorville CA

14029 Amargosa Rd, Victorville CA

14895 Bear Valley Rd, Hesperia CA

14073 Main St, Hesperia CA

14330 7th St, Victorville CA

14595 Seventh St, Victorville CA

14670 7th St, Victorville CA

12180 Amargosa Rd, Victorville CA

12220 Hesperia Rd, Victorville CA

15439 Bear Valley Rd, Hesperia CA

14096 Green Tree Blvd, Victorville CA

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ATTACHMENT B

TRAFFIC COUNTS

Table B-1
Driveway 1 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	47	0	0	0	0	0	47
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	45	2	0	0	0	0	47
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	58	0	0	0	0	0	58
12:45 AM - 1:00 AM	0	0	0	1	0	0	1	12:45 PM - 1:00 PM	46	4	0	0	0	0	50
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	53	0	0	0	0	0	53
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	60	0	0	0	1	0	61
1:30 AM - 1:45 AM	0	0	0	1	0	0	1	1:30 PM - 1:45 PM	35	2	1	1	0	0	39
1:45 AM - 2:00 AM	2	0	0	0	0	0	2	1:45 PM - 2:00 PM	48	1	1	0	0	0	50
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	42	0	0	0	0	0	42
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	51	3	0	0	0	0	54
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	33	1	1	0	0	0	35
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	60	0	0	0	0	0	60
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	40	0	0	0	0	0	40
3:15 AM - 3:30 AM	2	1	0	0	0	0	3	3:15 PM - 3:30 PM	56	0	0	0	0	0	56
3:30 AM - 3:45 AM	1	0	0	1	0	0	2	3:30 PM - 3:45 PM	68	2	0	0	0	0	70
3:45 AM - 4:00 AM	2	0	0	0	0	0	2	3:45 PM - 4:00 PM	59	0	0	0	0	0	59
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	40	0	0	0	0	0	40
4:15 AM - 4:30 AM	2	0	0	0	0	0	2	4:15 PM - 4:30 PM	46	1	1	0	0	0	48
4:30 AM - 4:45 AM	3	0	0	0	0	0	3	4:30 PM - 4:45 PM	58	0	0	0	0	0	58
4:45 AM - 5:00 AM	7	0	0	0	0	0	7	4:45 PM - 5:00 PM	56	1	0	0	0	0	57
5:00 AM - 5:15 AM	1	3	0	0	0	0	4	5:00 PM - 5:15 PM	47	0	0	0	0	0	47
5:15 AM - 5:30 AM	4	0	0	0	0	0	4	5:15 PM - 5:30 PM	47	0	0	0	0	0	47
5:30 AM - 5:45 AM	7	0	0	0	0	0	7	5:30 PM - 5:45 PM	44	0	0	0	0	0	44
5:45 AM - 6:00 AM	7	0	0	0	0	0	7	5:45 PM - 6:00 PM	51	1	0	0	0	0	52
6:00 AM - 6:15 AM	3	0	0	1	0	0	4	6:00 PM - 6:15 PM	38	1	1	1	0	0	41
6:15 AM - 6:30 AM	8	0	0	0	0	0	8	6:15 PM - 6:30 PM	50	0	0	0	0	0	50
6:30 AM - 6:45 AM	15	0	0	0	0	0	15	6:30 PM - 6:45 PM	50	1	0	0	0	0	51
6:45 AM - 7:00 AM	17	1	2	0	0	0	20	6:45 PM - 7:00 PM	37	0	0	1	0	0	38
7:00 AM - 7:15 AM	13	0	1	0	1	0	15	7:00 PM - 7:15 PM	33	1	0	0	0	0	34
7:15 AM - 7:30 AM	18	1	0	0	0	0	19	7:15 PM - 7:30 PM	36	0	0	0	0	0	36
7:30 AM - 7:45 AM	14	1	0	0	0	0	15	7:30 PM - 7:45 PM	38	0	0	0	0	0	38
7:45 AM - 8:00 AM	25	0	0	0	0	0	25	7:45 PM - 8:00 PM	27	0	0	0	0	0	27
8:00 AM - 8:15 AM	20	1	0	0	0	0	21	8:00 PM - 8:15 PM	28	0	0	0	0	0	28
8:15 AM - 8:30 AM	19	0	0	1	0	0	20	8:15 PM - 8:30 PM	25	0	0	1	0	0	26
8:30 AM - 8:45 AM	29	0	0	1	0	0	30	8:30 PM - 8:45 PM	20	0	0	0	0	0	20
8:45 AM - 9:00 AM	38	0	0	0	0	0	38	8:45 PM - 9:00 PM	22	0	0	0	0	0	22
9:00 AM - 9:15 AM	45	1	0	2	0	0	48	9:00 PM - 9:15 PM	14	0	0	0	0	0	14
9:15 AM - 9:30 AM	46	2	0	0	0	0	48	9:15 PM - 9:30 PM	7	0	0	0	0	0	7
9:30 AM - 9:45 AM	37	1	0	1	0	0	39	9:30 PM - 9:45 PM	7	0	0	1	0	0	8
9:45 AM - 10:00 AM	42	2	0	1	0	0	45	9:45 PM - 10:00 PM	13	0	0	1	0	0	14
10:00 AM - 10:15 AM	54	1	0	1	0	0	56	10:00 PM - 10:15 PM	6	0	0	0	0	0	6
10:15 AM - 10:30 AM	46	1	0	0	0	1	48	10:15 PM - 10:30 PM	5	0	0	1	0	0	6
10:30 AM - 10:45 AM	46	1	1	0	0	0	48	10:30 PM - 10:45 PM	10	0	0	0	0	0	10
10:45 AM - 11:00 AM	40	2	1	0	0	0	43	10:45 PM - 11:00 PM	6	0	0	0	0	0	6
11:00 AM - 11:15 AM	45	0	0	0	0	0	45	11:00 PM - 11:15 PM	6	0	0	0	0	0	6
11:15 AM - 11:30 AM	52	0	0	1	0	0	53	11:15 PM - 11:30 PM	4	0	0	0	0	0	4
11:30 AM - 11:45 AM	42	3	0	1	0	1	47	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	51	1	0	0	0	0	52	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	808	23	5	13	1	2	852	Total	1,674	21	5	7	1	0	1,708
								Total AM + PM	2,482	44	10	20	2	2	2,560

Table B-2
Driveway 1 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	9	0	0	0	0	0	9	12:00 PM - 12:15 PM	63	0	0	0	0	0	63
12:15 AM - 12:30 AM	3	0	0	0	0	0	3	12:15 PM - 12:30 PM	66	2	0	0	0	0	68
12:30 AM - 12:45 AM	4	0	0	0	0	0	4	12:30 PM - 12:45 PM	63	0	0	0	0	0	63
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	67	1	0	1	0	0	69
1:00 AM - 1:15 AM	3	0	0	0	0	0	3	1:00 PM - 1:15 PM	56	0	0	0	0	0	56
1:15 AM - 1:30 AM	4	0	0	0	0	0	4	1:15 PM - 1:30 PM	59	0	0	0	0	0	59
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	58	0	0	0	0	0	58
1:45 AM - 2:00 AM	0	0	0	1	0	0	1	1:45 PM - 2:00 PM	59	1	1	2	0	0	63
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	59	1	0	0	0	0	60
2:15 AM - 2:30 AM	0	0	0	1	0	0	1	2:15 PM - 2:30 PM	67	0	0	0	0	0	67
2:30 AM - 2:45 AM	1	0	0	0	0	0	1	2:30 PM - 2:45 PM	54	1	1	0	0	0	56
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	64	3	1	0	0	0	68
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	55	1	0	0	0	0	56
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	55	0	0	0	0	0	55
3:30 AM - 3:45 AM	3	0	0	0	0	0	3	3:30 PM - 3:45 PM	62	1	0	0	0	0	63
3:45 AM - 4:00 AM	2	1	0	0	0	0	3	3:45 PM - 4:00 PM	65	2	0	0	0	0	67
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	59	1	0	0	0	0	60
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	75	0	0	0	0	0	75
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	64	0	1	1	0	0	66
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	66	1	0	0	0	0	67
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	62	1	0	0	0	0	63
5:15 AM - 5:30 AM	1	0	0	0	0	0	1	5:15 PM - 5:30 PM	59	0	0	1	0	0	60
5:30 AM - 5:45 AM	3	2	0	0	0	0	5	5:30 PM - 5:45 PM	57	0	0	0	0	0	57
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	64	1	0	0	0	0	65
6:00 AM - 6:15 AM	1	0	0	1	0	0	2	6:00 PM - 6:15 PM	68	2	0	0	0	0	70
6:15 AM - 6:30 AM	6	0	0	0	0	0	6	6:15 PM - 6:30 PM	64	1	0	0	0	0	65
6:30 AM - 6:45 AM	3	0	0	0	0	0	3	6:30 PM - 6:45 PM	71	0	0	0	0	0	71
6:45 AM - 7:00 AM	9	1	1	0	0	0	11	6:45 PM - 7:00 PM	44	0	0	0	0	0	44
7:00 AM - 7:15 AM	10	1	0	0	0	0	11	7:00 PM - 7:15 PM	52	1	0	0	0	0	53
7:15 AM - 7:30 AM	17	1	0	0	0	0	18	7:15 PM - 7:30 PM	59	0	0	0	0	0	59
7:30 AM - 7:45 AM	16	1	0	0	0	0	17	7:30 PM - 7:45 PM	46	1	0	0	0	0	47
7:45 AM - 8:00 AM	21	1	0	1	0	0	23	7:45 PM - 8:00 PM	49	0	0	0	0	0	49
8:00 AM - 8:15 AM	14	0	0	0	0	0	14	8:00 PM - 8:15 PM	56	0	0	0	0	0	56
8:15 AM - 8:30 AM	23	1	0	1	0	0	25	8:15 PM - 8:30 PM	53	0	0	0	0	0	53
8:30 AM - 8:45 AM	23	0	1	1	0	0	25	8:30 PM - 8:45 PM	45	0	0	0	0	0	45
8:45 AM - 9:00 AM	30	0	0	1	0	0	31	8:45 PM - 9:00 PM	38	0	0	0	0	0	38
9:00 AM - 9:15 AM	30	0	1	1	0	1	33	9:00 PM - 9:15 PM	33	0	0	0	0	0	33
9:15 AM - 9:30 AM	26	0	0	0	0	0	26	9:15 PM - 9:30 PM	22	0	0	0	0	0	22
9:30 AM - 9:45 AM	39	1	0	0	0	0	40	9:30 PM - 9:45 PM	21	0	0	0	0	0	21
9:45 AM - 10:00 AM	43	0	0	1	0	0	44	9:45 PM - 10:00 PM	16	0	0	0	0	0	16
10:00 AM - 10:15 AM	36	2	0	0	0	0	38	10:00 PM - 10:15 PM	20	0	0	0	0	0	20
10:15 AM - 10:30 AM	35	1	0	1	0	0	37	10:15 PM - 10:30 PM	10	0	0	1	0	0	11
10:30 AM - 10:45 AM	46	3	1	1	0	0	51	10:30 PM - 10:45 PM	9	0	0	0	0	0	9
10:45 AM - 11:00 AM	57	1	0	0	0	0	58	10:45 PM - 11:00 PM	10	1	0	1	0	0	12
11:00 AM - 11:15 AM	51	1	0	0	0	0	52	11:00 PM - 11:15 PM	15	0	0	0	0	0	15
11:15 AM - 11:30 AM	56	1	0	0	0	0	57	11:15 PM - 11:30 PM	7	0	0	0	0	0	7
11:30 AM - 11:45 AM	35	0	0	0	0	0	35	11:30 PM - 11:45 PM	3	0	0	0	0	0	3
11:45 AM - 12:00 PM	47	0	0	0	0	1	48	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	712	19	4	11	0	2	748	Total	2,291	23	4	7	0	0	2,325
								Total AM + PM	3,003	42	8	18	0	2	3,073

Table B-3
Driveway 2 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	0	0	0	0	0	0	0
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	2	0	0	0	0	0	2
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	1	0	0	0	0	0	1
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	2	0	0	0	0	0	2
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	1	0	0	0	0	0	1
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	3	0	0	0	0	0	3
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	2	0	0	0	0	0	2
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	3	1	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	2	0	0	0	0	0	2
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	0	1	0	0	0	0	1
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	1	0	0	0	0	0	1
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	1	0	0	0	0	0	1
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	2	0	0	0	0	0	2
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	1	0	0	0	0	0	1
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	1	0	0	0	0	0	1
3:45 AM - 4:00 AM	2	0	0	0	0	0	2	3:45 PM - 4:00 PM	3	0	0	0	0	0	3
4:00 AM - 4:15 AM	0	1	0	0	0	0	1	4:00 PM - 4:15 PM	2	0	0	0	0	0	2
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	1	0	0	0	0	0	1
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	1	0	0	0	0	0	1
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	2	0	0	0	0	0	2
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	1	0	0	0	0	0	1
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	3	0	0	0	0	0	3
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	1	0	0	0	0	0	1
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	3	0	0	0	0	0	3
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	3	0	0	0	0	0	3
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	1	0	0	0	0	0	1
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	3	0	0	0	0	0	3
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	3	0	0	0	0	0	3
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	4	0	0	0	0	0	4
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	2	0	0	0	0	0	2
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	1	0	0	0	0	0	1
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	2	0	0	0	0	0	2
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	8:15 PM - 8:30 PM	1	0	0	0	0	0	1
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	8:30 PM - 8:45 PM	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	0	0	0	0	0	0	0
9:00 AM - 9:15 AM	2	0	0	0	0	0	2	9:00 PM - 9:15 PM	0	0	0	0	0	0	0
9:15 AM - 9:30 AM	2	0	0	0	0	0	2	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	2	0	0	0	1	0	3	9:30 PM - 9:45 PM	1	0	0	0	0	0	1
9:45 AM - 10:00 AM	1	0	0	0	0	0	1	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	1	0	0	0	0	0	1	10:00 PM - 10:15 PM	0	0	0	0	0	0	0
10:15 AM - 10:30 AM	2	0	0	0	0	0	2	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	2	0	0	0	0	0	2	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	2	0	0	0	0	0	2	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	5	0	0	0	0	0	5	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	2	0	0	0	0	0	2	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	2	0	0	0	0	0	2	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	35	1	0	0	1	0	37	Total	62	2	0	0	0	0	64
								Total AM + PM	97	3	0	0	1	0	101

Table B-4
Driveway 2 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	2	0	0	0	0	0	2
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	5	0	0	0	0	0	5
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	5	0	0	1	0	0	6
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	10	0	0	0	0	0	10
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	4	0	0	0	0	0	4
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	10	0	0	0	0	0	10
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	4	0	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	3	1	0	0	0	0	4
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	5	1	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	11	0	0	0	0	0	11
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	3	1	0	0	0	0	4
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	3	0	0	0	0	0	3
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	5	1	0	0	0	0	6
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	3	0	0	0	0	0	3
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	3	0	0	0	0	0	3
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	3	0	0	0	0	0	3
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	6	1	0	0	0	0	7
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	4	0	0	0	0	0	4
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	12	0	0	0	0	0	12
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	5	0	0	0	0	0	5
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	6	0	0	0	0	0	6
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	7	0	0	0	0	0	7
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	9	0	0	0	0	0	9
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	2	0	0	0	0	0	2
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	2	0	0	0	0	0	2
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	9	0	0	0	0	0	9
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	8:30 PM - 8:45 PM	3	0	0	0	0	0	3
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	6	0	0	0	0	0	6
9:00 AM - 9:15 AM	0	0	0	0	0	0	0	9:00 PM - 9:15 PM	0	1	0	0	0	0	1
9:15 AM - 9:30 AM	1	0	0	0	0	0	1	9:15 PM - 9:30 PM	1	0	0	0	0	0	1
9:30 AM - 9:45 AM	2	0	0	0	0	0	2	9:30 PM - 9:45 PM	1	0	0	0	0	0	1
9:45 AM - 10:00 AM	3	0	0	0	0	0	3	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	3	0	0	0	0	0	3
10:15 AM - 10:30 AM	3	0	0	0	0	0	3	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	4	0	0	0	0	0	4	10:30 PM - 10:45 PM	2	0	0	0	0	0	2
10:45 AM - 11:00 AM	5	1	0	0	0	0	6	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	1	0	0	0	0	0	1	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	4	0	0	0	0	0	4	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	7	0	0	0	0	0	7	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	5	0	0	0	0	0	5	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	40	1	0	0	0	0	41	Total	198	6	0	1	0	0	205
								Total AM + PM	238	7	0	1	0	0	246

Table B-5
Driveway 3 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	99	4	0	1	0	1	105
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	99	1	1	0	0	1	102
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	106	5	1	2	0	1	115
12:45 AM - 1:00 AM	1	0	0	1	0	0	2	12:45 PM - 1:00 PM	93	1	0	0	0	0	94
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	92	3	0	0	0	1	96
1:15 AM - 1:30 AM	4	0	0	1	0	0	5	1:15 PM - 1:30 PM	81	2	0	0	0	1	84
1:30 AM - 1:45 AM	1	0	0	0	0	0	1	1:30 PM - 1:45 PM	101	1	0	1	0	0	103
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	83	2	0	1	0	0	86
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	76	6	0	1	0	1	84
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	79	0	2	0	0	1	82
2:30 AM - 2:45 AM	3	0	0	1	0	0	4	2:30 PM - 2:45 PM	80	2	2	2	0	1	87
2:45 AM - 3:00 AM	1	0	0	2	0	0	3	2:45 PM - 3:00 PM	79	3	0	1	0	0	83
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	74	2	0	0	0	0	76
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	96	2	0	0	0	1	99
3:30 AM - 3:45 AM	2	0	0	0	0	0	2	3:30 PM - 3:45 PM	79	1	0	0	0	1	81
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	99	1	0	1	0	1	102
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	89	2	0	0	0	0	91
4:15 AM - 4:30 AM	3	0	0	0	0	0	3	4:15 PM - 4:30 PM	77	2	0	2	0	1	82
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	76	3	0	0	0	0	79
4:45 AM - 5:00 AM	16	0	0	0	0	0	16	4:45 PM - 5:00 PM	102	3	0	0	0	1	106
5:00 AM - 5:15 AM	7	1	0	0	0	0	8	5:00 PM - 5:15 PM	99	2	0	0	0	1	102
5:15 AM - 5:30 AM	6	0	0	0	0	0	6	5:15 PM - 5:30 PM	96	0	0	0	0	0	96
5:30 AM - 5:45 AM	6	1	0	0	0	0	7	5:30 PM - 5:45 PM	81	4	0	0	0	0	85
5:45 AM - 6:00 AM	10	2	0	0	0	0	12	5:45 PM - 6:00 PM	110	1	0	1	1	1	114
6:00 AM - 6:15 AM	14	1	1	0	0	1	17	6:00 PM - 6:15 PM	100	0	0	0	0	0	100
6:15 AM - 6:30 AM	13	1	0	0	0	0	14	6:15 PM - 6:30 PM	83	0	0	0	0	1	84
6:30 AM - 6:45 AM	14	2	1	0	0	0	17	6:30 PM - 6:45 PM	67	0	0	0	0	0	67
6:45 AM - 7:00 AM	18	0	0	1	0	0	19	6:45 PM - 7:00 PM	103	0	1	0	0	0	104
7:00 AM - 7:15 AM	14	1	1	2	0	1	19	7:00 PM - 7:15 PM	77	2	0	0	0	0	79
7:15 AM - 7:30 AM	24	2	0	0	0	0	26	7:15 PM - 7:30 PM	73	0	0	0	0	1	74
7:30 AM - 7:45 AM	30	1	0	0	0	0	31	7:30 PM - 7:45 PM	68	0	0	0	0	0	68
7:45 AM - 8:00 AM	33	3	0	0	0	0	36	7:45 PM - 8:00 PM	59	1	0	1	0	0	61
8:00 AM - 8:15 AM	31	2	0	1	0	1	35	8:00 PM - 8:15 PM	50	0	0	0	0	0	50
8:15 AM - 8:30 AM	40	2	1	1	0	0	44	8:15 PM - 8:30 PM	49	0	0	0	0	1	50
8:30 AM - 8:45 AM	51	3	0	0	0	0	54	8:30 PM - 8:45 PM	41	0	0	0	0	0	41
8:45 AM - 9:00 AM	58	0	0	3	0	0	61	8:45 PM - 9:00 PM	34	0	0	0	0	0	34
9:00 AM - 9:15 AM	86	6	3	1	0	1	97	9:00 PM - 9:15 PM	28	0	0	0	0	1	29
9:15 AM - 9:30 AM	63	4	0	1	0	0	68	9:15 PM - 9:30 PM	21	0	0	1	0	0	22
9:30 AM - 9:45 AM	67	1	0	0	0	1	69	9:30 PM - 9:45 PM	20	0	0	0	0	0	20
9:45 AM - 10:00 AM	73	2	0	0	0	0	75	9:45 PM - 10:00 PM	20	1	0	0	0	0	21
10:00 AM - 10:15 AM	76	3	1	0	0	1	81	10:00 PM - 10:15 PM	11	0	0	0	0	0	11
10:15 AM - 10:30 AM	89	3	1	0	0	0	93	10:15 PM - 10:30 PM	9	1	0	0	0	0	10
10:30 AM - 10:45 AM	79	0	0	0	0	0	79	10:30 PM - 10:45 PM	8	0	0	0	0	0	8
10:45 AM - 11:00 AM	106	3	1	0	0	1	111	10:45 PM - 11:00 PM	6	0	0	0	0	0	6
11:00 AM - 11:15 AM	104	2	0	0	0	2	108	11:00 PM - 11:15 PM	4	0	0	0	0	0	4
11:15 AM - 11:30 AM	78	1	0	1	0	1	81	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	88	2	1	0	0	0	91	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	90	1	0	0	0	0	91	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	1,412	50	11	16	0	10	1,499	Total	3,081	58	7	15	1	19	3,181
								Total AM + PM	4,493	108	18	31	1	29	4,680

Table B-6
Driveway 3 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	7	0	0	0	0	0	7	12:00 PM - 12:15 PM	80	2	0	0	0	2	84
12:15 AM - 12:30 AM	5	0	0	0	0	0	5	12:15 PM - 12:30 PM	88	4	0	1	0	1	94
12:30 AM - 12:45 AM	6	0	0	0	0	0	6	12:30 PM - 12:45 PM	101	2	1	0	0	0	104
12:45 AM - 1:00 AM	5	0	0	0	0	0	5	12:45 PM - 1:00 PM	90	2	0	1	0	0	93
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	89	4	0	0	0	1	94
1:15 AM - 1:30 AM	2	0	0	0	0	0	2	1:15 PM - 1:30 PM	87	1	0	1	0	2	91
1:30 AM - 1:45 AM	1	0	0	0	0	0	1	1:30 PM - 1:45 PM	87	3	2	1	0	0	93
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	74	2	0	0	0	0	76
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	78	3	0	1	1	2	85
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	84	4	0	2	0	1	91
2:30 AM - 2:45 AM	2	0	0	0	0	0	2	2:30 PM - 2:45 PM	78	2	0	0	0	0	80
2:45 AM - 3:00 AM	1	2	0	0	0	0	3	2:45 PM - 3:00 PM	72	1	1	0	0	0	74
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	77	4	1	1	0	1	84
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	81	2	0	0	0	1	84
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	76	0	0	0	0	1	77
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	82	2	0	0	0	0	84
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	79	1	0	0	0	1	81
4:15 AM - 4:30 AM	1	1	0	0	0	0	2	4:15 PM - 4:30 PM	86	2	0	1	0	0	89
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	60	2	0	1	0	1	64
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	85	0	0	0	0	1	86
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	90	3	0	1	0	1	95
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	102	2	0	0	0	0	104
5:30 AM - 5:45 AM	4	0	0	0	0	0	4	5:30 PM - 5:45 PM	67	2	0	0	0	0	69
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	93	2	0	0	0	1	96
6:00 AM - 6:15 AM	5	1	0	0	0	0	6	6:00 PM - 6:15 PM	85	1	0	0	0	1	87
6:15 AM - 6:30 AM	7	0	0	0	0	0	7	6:15 PM - 6:30 PM	88	1	1	0	0	0	90
6:30 AM - 6:45 AM	11	0	0	0	0	0	11	6:30 PM - 6:45 PM	83	0	0	0	0	0	83
6:45 AM - 7:00 AM	15	2	0	0	0	1	18	6:45 PM - 7:00 PM	92	0	0	0	0	1	93
7:00 AM - 7:15 AM	17	0	0	0	0	0	17	7:00 PM - 7:15 PM	94	0	0	0	0	0	94
7:15 AM - 7:30 AM	8	1	3	1	0	0	13	7:15 PM - 7:30 PM	63	0	0	0	0	0	63
7:30 AM - 7:45 AM	18	3	0	0	0	0	21	7:30 PM - 7:45 PM	78	1	0	1	0	0	80
7:45 AM - 8:00 AM	22	2	0	1	1	1	27	7:45 PM - 8:00 PM	60	1	0	0	0	0	61
8:00 AM - 8:15 AM	26	0	0	0	0	0	26	8:00 PM - 8:15 PM	76	0	0	0	0	1	77
8:15 AM - 8:30 AM	18	0	0	0	0	0	18	8:15 PM - 8:30 PM	56	0	0	0	0	0	56
8:30 AM - 8:45 AM	19	3	0	0	0	0	22	8:30 PM - 8:45 PM	54	0	0	0	0	0	54
8:45 AM - 9:00 AM	27	0	0	2	0	1	30	8:45 PM - 9:00 PM	64	0	0	0	0	0	64
9:00 AM - 9:15 AM	48	1	0	1	0	0	50	9:00 PM - 9:15 PM	46	1	0	1	0	1	49
9:15 AM - 9:30 AM	33	2	1	0	0	1	37	9:15 PM - 9:30 PM	53	0	0	0	0	0	53
9:30 AM - 9:45 AM	50	0	1	1	0	0	52	9:30 PM - 9:45 PM	46	0	0	0	0	0	46
9:45 AM - 10:00 AM	58	5	1	1	0	0	65	9:45 PM - 10:00 PM	30	0	0	0	0	0	30
10:00 AM - 10:15 AM	67	1	0	0	0	1	69	10:00 PM - 10:15 PM	27	1	0	0	0	0	28
10:15 AM - 10:30 AM	57	1	0	1	0	0	59	10:15 PM - 10:30 PM	19	0	0	0	0	0	19
10:30 AM - 10:45 AM	71	1	0	0	0	1	73	10:30 PM - 10:45 PM	24	0	0	0	0	0	24
10:45 AM - 11:00 AM	66	4	1	0	0	1	72	10:45 PM - 11:00 PM	18	0	0	0	0	0	18
11:00 AM - 11:15 AM	69	1	1	0	0	1	72	11:00 PM - 11:15 PM	14	0	0	0	0	0	14
11:15 AM - 11:30 AM	67	0	0	0	0	0	67	11:15 PM - 11:30 PM	10	0	0	0	0	0	10
11:30 AM - 11:45 AM	90	2	0	0	0	0	92	11:30 PM - 11:45 PM	6	0	0	0	0	0	6
11:45 AM - 12:00 PM	73	1	0	0	0	1	75	11:45 PM - 12:00 AM	10	0	0	0	0	0	10
Total	986	34	8	8	1	9	1,046	Total	3,182	58	6	13	1	21	3,281
								Total AM + PM	4,168	92	14	21	2	30	4,327

Table B-7
Driveway 4 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	16	0	0	0	0	0	16
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	9	3	0	0	0	0	12
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	13	0	0	0	0	0	13
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	11	0	0	0	0	0	11
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	14	0	0	0	0	0	14
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	6	0	0	0	0	0	6
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	11	0	0	0	0	0	11
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	10	0	0	0	0	0	10
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	1	0	0	0	0	8
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	15	1	0	0	0	0	16
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	16	0	0	0	0	0	16
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	10	0	0	0	0	0	10
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	12	0	0	0	0	0	12
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	14	1	0	0	0	0	15
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	10	0	0	1	0	0	11
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	7	0	0	0	0	0	7
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	15	0	0	0	0	0	15
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	25	0	0	0	0	0	25
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	15	0	0	0	0	0	15
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	13	0	0	0	0	0	13
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	17	0	0	0	0	0	17
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	10	0	0	0	0	0	10
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	6	0	0	0	0	0	6
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	2	0	0	0	0	0	2	6:30 PM - 6:45 PM	5	0	0	0	0	0	5
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	7	0	0	0	0	0	7
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	6	0	0	0	0	0	6
7:15 AM - 7:30 AM	1	0	0	0	0	0	1	7:15 PM - 7:30 PM	1	0	0	0	0	0	1
7:30 AM - 7:45 AM	1	0	0	0	0	0	1	7:30 PM - 7:45 PM	9	0	0	0	0	0	9
7:45 AM - 8:00 AM	4	0	0	0	0	0	4	7:45 PM - 8:00 PM	7	0	0	0	0	0	7
8:00 AM - 8:15 AM	4	0	0	0	0	0	4	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	4	0	0	0	0	0	4	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	5	1	0	0	0	0	6	8:30 PM - 8:45 PM	3	0	0	0	0	0	3
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	5	0	1	0	0	0	6	9:00 PM - 9:15 PM	1	0	0	0	0	0	1
9:15 AM - 9:30 AM	5	0	0	0	0	0	5	9:15 PM - 9:30 PM	0	0	0	0	0	0	0
9:30 AM - 9:45 AM	9	0	0	0	0	0	9	9:30 PM - 9:45 PM	2	0	0	0	0	0	2
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	8	0	0	0	0	0	8	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	7	1	0	0	0	0	8	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	7	0	0	0	0	0	7	10:30 PM - 10:45 PM	0	0	0	1	0	0	1
10:45 AM - 11:00 AM	8	0	0	0	0	0	8	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	15	0	0	0	0	0	15	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	9	0	0	0	0	0	9	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	8	1	0	0	0	0	9	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	11	0	0	0	0	0	11	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	130	3	1	0	0	0	134	Total	357	6	0	2	0	0	365
								Total AM + PM	487	9	1	2	0	0	499

Table B-8
Driveway 4 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	13	0	0	0	0	0	13
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	12	1	0	0	0	0	13
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	8	1	0	0	0	0	9
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	19	1	0	0	0	0	20
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	13	0	0	0	0	0	13
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	9	1	0	0	0	0	10
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	13	0	0	0	0	0	13
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	14	0	0	0	0	0	14
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	0	0	0	0	0	7
2:30 AM - 2:45 AM	0	0	0	1	0	0	1	2:30 PM - 2:45 PM	9	0	0	0	0	0	9
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	8	2	0	0	0	0	10
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	6	0	0	0	0	0	6
3:15 AM - 3:30 AM	0	0	0	3	0	0	3	3:15 PM - 3:30 PM	7	0	0	0	0	0	7
3:30 AM - 3:45 AM	0	0	0	1	0	0	1	3:30 PM - 3:45 PM	16	1	0	0	0	0	17
3:45 AM - 4:00 AM	0	2	0	0	0	0	2	3:45 PM - 4:00 PM	12	0	0	0	0	0	12
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	9	0	0	0	0	0	9
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	4	0	0	0	0	0	4
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	6	0	0	0	0	0	6
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	10	0	0	0	0	0	10
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	9	1	0	0	0	0	10
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	1	0	0	0	0	10
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	13	0	0	0	0	0	13
5:45 AM - 6:00 AM	0	1	0	0	0	0	1	5:45 PM - 6:00 PM	8	1	0	0	0	0	9
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	11	0	0	0	0	0	11
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	6	0	0	0	0	0	6
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	1	0	0	0	0	0	1
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	10	0	0	0	0	0	10
7:00 AM - 7:15 AM	1	1	0	1	0	0	3	7:00 PM - 7:15 PM	7	0	0	0	0	0	7
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	11	0	0	0	0	0	11
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	9	0	0	0	0	0	9
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	4	0	0	0	0	0	4
8:00 AM - 8:15 AM	3	1	0	0	0	0	4	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	4	1	0	0	0	0	5	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	3	0	0	0	0	0	3	8:30 PM - 8:45 PM	3	1	0	0	0	0	4
8:45 AM - 9:00 AM	2	1	0	0	0	0	3	8:45 PM - 9:00 PM	1	0	0	0	0	0	1
9:00 AM - 9:15 AM	5	0	0	0	0	0	5	9:00 PM - 9:15 PM	2	0	0	0	0	0	2
9:15 AM - 9:30 AM	7	0	0	1	0	0	8	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	5	1	0	0	0	0	6	9:30 PM - 9:45 PM	1	0	0	1	0	0	2
9:45 AM - 10:00 AM	5	1	0	0	0	0	6	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	7	0	0	0	0	0	7	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	10	0	0	0	0	0	10	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	8	0	0	0	0	0	8	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	14	0	1	0	0	0	15	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	13	0	1	0	0	0	14	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	12	0	0	0	0	0	12	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	8	1	0	0	0	0	9	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	120	10	2	7	0	0	139	Total	328	11	0	1	0	0	340
								Total AM + PM	448	21	2	8	0	0	479

Table B-9
Driveway 5 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	10	0	0	0	0	0	10
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	7	1	0	0	0	0	8
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	8	0	0	0	0	0	8
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	2	0	0	0	0	0	2
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	7	1	0	0	0	0	8
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	5	1	0	0	0	0	6
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	5	0	0	0	0	0	5
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	7	0	0	0	0	0	7
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	1	0	0	1	0	9
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	12	0	0	0	0	0	12
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	9	0	0	0	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	1	0	0	0	0	9
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	10	0	0	0	0	0	10
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	11	0	0	0	0	0	11
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	8	0	0	0	0	0	8
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	8	0	0	0	0	0	8
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	5	0	0	0	0	0	5
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	9	0	0	0	0	0	9
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	21	0	0	0	0	0	21
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	12	0	0	0	0	0	12
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	0	0	0	0	0	9
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	2	0	0	0	0	0	2
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	7	0	0	0	0	0	7
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	6	0	0	0	0	0	6
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	6	1	0	0	0	0	7
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	5	0	0	0	0	0	5
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	10	0	0	0	0	0	10
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	8	0	0	0	0	0	8
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	5	0	0	0	0	0	5
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	8	0	0	0	0	0	8
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	1	0	0	0	0	0	1	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	3	0	0	0	0	0	3	8:30 PM - 8:45 PM	5	0	0	0	0	0	5
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	3	0	0	0	0	0	3
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	3	0	0	0	0	0	3
9:15 AM - 9:30 AM	1	0	0	0	0	0	1	9:15 PM - 9:30 PM	6	0	0	0	0	0	6
9:30 AM - 9:45 AM	4	0	0	0	0	0	4	9:30 PM - 9:45 PM	5	0	0	0	0	0	5
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	4	0	0	0	0	0	4
10:15 AM - 10:30 AM	6	0	0	0	0	0	6	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	6	0	0	0	0	0	6	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	7	0	0	0	0	0	7	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	10	0	0	0	0	0	10	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	5	0	0	0	0	0	5	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	10	0	0	0	0	0	10	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	10	0	0	0	0	0	10	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	86	0	0	0	0	0	86	Total	286	6	0	0	1	0	293
								Total AM + PM	372	6	0	0	1	0	379

Table B-10
Driveway 5 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	17	0	0	0	0	0	17
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	19	0	0	0	0	0	19
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	21	1	0	0	0	0	22
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	22	0	0	0	0	0	22
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	14	1	0	0	0	0	15
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	18	0	0	0	0	0	18
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	15	1	0	0	0	0	16
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	13	1	0	0	0	0	14
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	11	1	0	0	0	0	12
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	15	1	0	0	0	0	16
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	17	0	0	0	0	0	17
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	16	1	0	0	0	0	17
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	22	1	0	1	0	0	24
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	21	0	0	0	0	0	21
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	17	0	0	1	0	0	18
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	18	1	0	0	0	0	19
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	17	0	1	0	0	0	18
4:15 AM - 4:30 AM	2	0	0	0	0	0	2	4:15 PM - 4:30 PM	17	0	0	0	0	0	17
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	15	0	0	0	0	0	15
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	21	1	1	0	0	0	23
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	16	0	0	0	0	0	16
5:15 AM - 5:30 AM	1	0	0	0	0	0	1	5:15 PM - 5:30 PM	18	0	0	0	0	0	18
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	20	0	0	0	0	0	20
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	12	0	0	0	0	0	12
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	15	1	0	0	0	0	16
6:15 AM - 6:30 AM	0	1	0	0	0	0	1	6:15 PM - 6:30 PM	19	0	0	0	0	0	19
6:30 AM - 6:45 AM	0	2	0	0	0	0	2	6:30 PM - 6:45 PM	22	0	0	0	0	0	22
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	11	0	0	0	0	0	11
7:00 AM - 7:15 AM	2	0	0	0	0	0	2	7:00 PM - 7:15 PM	19	0	0	0	0	0	19
7:15 AM - 7:30 AM	1	0	0	0	0	0	1	7:15 PM - 7:30 PM	17	0	0	0	0	0	17
7:30 AM - 7:45 AM	2	0	0	0	0	0	2	7:30 PM - 7:45 PM	10	0	0	0	0	0	10
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	15	0	0	0	0	0	15
8:00 AM - 8:15 AM	3	1	0	0	0	0	4	8:00 PM - 8:15 PM	12	0	0	0	0	0	12
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	12	0	0	0	0	0	12
8:30 AM - 8:45 AM	3	1	0	0	0	0	4	8:30 PM - 8:45 PM	13	0	0	0	0	0	13
8:45 AM - 9:00 AM	5	0	0	0	0	0	5	8:45 PM - 9:00 PM	10	0	0	0	0	0	10
9:00 AM - 9:15 AM	4	1	0	0	0	0	5	9:00 PM - 9:15 PM	7	0	0	0	0	0	7
9:15 AM - 9:30 AM	6	1	0	2	0	0	9	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	8	0	0	0	0	0	8	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	11	1	0	0	0	0	12	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	14	0	0	0	0	0	14	10:00 PM - 10:15 PM	13	0	0	0	0	0	13
10:15 AM - 10:30 AM	3	2	0	0	0	0	5	10:15 PM - 10:30 PM	5	0	0	1	0	0	6
10:30 AM - 10:45 AM	12	1	0	0	0	0	13	10:30 PM - 10:45 PM	5	0	0	1	0	0	6
10:45 AM - 11:00 AM	15	0	1	1	0	0	17	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	20	2	0	0	0	0	22	11:00 PM - 11:15 PM	4	0	0	0	0	0	4
11:15 AM - 11:30 AM	10	0	0	0	0	0	10	11:15 PM - 11:30 PM	7	0	0	0	0	0	7
11:30 AM - 11:45 AM	16	0	0	1	0	1	18	11:30 PM - 11:45 PM	2	0	0	1	0	0	3
11:45 AM - 12:00 PM	13	0	0	3	0	0	16	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	167	13	1	7	0	1	189	Total	647	11	2	5	0	0	665
								Total AM + PM	814	24	3	12	0	1	854

Table B-11
Driveway 6 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	7	0	1	0	0	0	8
12:15 AM - 12:30 AM	2	0	0	0	0	0	2	12:15 PM - 12:30 PM	4	0	0	0	0	0	4
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	3	0	0	0	0	0	3
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	9	0	0	0	0	0	9
1:15 AM - 1:30 AM	4	0	0	0	0	0	4	1:15 PM - 1:30 PM	11	1	0	0	0	0	12
1:30 AM - 1:45 AM	1	0	0	0	0	0	1	1:30 PM - 1:45 PM	5	0	0	0	0	0	5
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	6	1	1	0	0	0	8
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	5	1	0	0	0	0	6
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	3	1	0	0	0	0	4
2:30 AM - 2:45 AM	5	0	0	0	0	0	5	2:30 PM - 2:45 PM	8	1	0	0	0	0	9
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	2	0	0	0	0	0	2	3:00 PM - 3:15 PM	4	0	0	0	0	0	4
3:15 AM - 3:30 AM	5	0	0	0	0	0	5	3:15 PM - 3:30 PM	6	0	0	0	0	0	6
3:30 AM - 3:45 AM	4	0	0	0	0	0	4	3:30 PM - 3:45 PM	7	1	0	0	0	0	8
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	6	0	0	0	0	0	6
4:00 AM - 4:15 AM	5	0	0	0	0	0	5	4:00 PM - 4:15 PM	10	0	0	0	0	0	10
4:15 AM - 4:30 AM	4	0	0	0	0	0	4	4:15 PM - 4:30 PM	6	0	0	0	0	0	6
4:30 AM - 4:45 AM	8	3	0	0	0	0	11	4:30 PM - 4:45 PM	9	0	0	0	0	0	9
4:45 AM - 5:00 AM	7	0	0	0	0	0	7	4:45 PM - 5:00 PM	9	0	0	0	0	0	9
5:00 AM - 5:15 AM	4	2	0	0	0	0	6	5:00 PM - 5:15 PM	8	0	0	0	0	0	8
5:15 AM - 5:30 AM	4	2	0	0	0	0	6	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	3	0	0	0	0	0	3	5:30 PM - 5:45 PM	9	0	0	0	0	0	9
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	5	0	0	0	0	0	5
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	4	0	0	0	0	0	4
6:15 AM - 6:30 AM	6	1	0	0	0	0	7	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	4	0	0	0	0	0	4	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	4	1	0	0	0	0	5	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	7	0	0	0	0	0	7	7:00 PM - 7:15 PM	4	1	0	0	0	0	5
7:15 AM - 7:30 AM	5	0	0	1	0	0	6	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	5	0	0	0	0	0	5	7:30 PM - 7:45 PM	10	0	0	0	0	0	10
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	4	2	0	0	0	0	6	8:00 PM - 8:15 PM	4	0	0	0	0	0	4
8:15 AM - 8:30 AM	7	0	0	0	0	0	7	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	7	0	0	0	0	0	7	8:30 PM - 8:45 PM	1	0	0	1	0	0	2
8:45 AM - 9:00 AM	5	0	0	0	0	0	5	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	7	0	1	0	0	0	8	9:00 PM - 9:15 PM	8	0	1	0	0	0	9
9:15 AM - 9:30 AM	8	0	0	0	0	0	8	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	6	1	0	0	0	0	7	9:30 PM - 9:45 PM	0	0	0	0	0	0	0
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	3	0	0	0	0	0	3
10:15 AM - 10:30 AM	2	0	0	0	0	0	2	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	4	0	0	0	0	0	4	10:45 PM - 11:00 PM	2	0	0	0	0	0	2
11:00 AM - 11:15 AM	7	0	0	0	0	0	7	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	6	0	0	0	0	0	6	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	3	0	0	0	0	0	3	11:30 PM - 11:45 PM	3	1	0	0	0	0	4
11:45 AM - 12:00 PM	5	1	0	0	0	0	6	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	192	13	1	1	0	0	207	Total	243	8	3	1	0	0	255
								Total AM + PM	435	21	4	2	0	0	462

Table B-12
Driveway 6 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	2	0	0	0	0	0	2	12:00 PM - 12:15 PM	3	0	0	0	0	0	3
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	6	0	0	0	0	0	6
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	1	0	0	1	0	0	2
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	5	0	0	0	0	0	5
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	7	0	0	0	0	0	7
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	14	0	0	0	0	0	14
1:30 AM - 1:45 AM	2	0	0	0	0	0	2	1:30 PM - 1:45 PM	4	0	0	0	1	0	5
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	4	0	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	5	0	0	0	0	0	5
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	7	0	0	0	0	0	7
2:45 AM - 3:00 AM	3	0	0	0	0	0	3	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	3	0	0	0	0	0	3	3:00 PM - 3:15 PM	10	0	0	0	0	0	10
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	5	0	0	0	0	0	5	3:30 PM - 3:45 PM	5	0	0	0	0	0	5
3:45 AM - 4:00 AM	1	1	0	0	0	0	2	3:45 PM - 4:00 PM	4	0	0	0	0	0	4
4:00 AM - 4:15 AM	2	0	0	0	0	0	2	4:00 PM - 4:15 PM	5	0	0	0	0	0	5
4:15 AM - 4:30 AM	4	0	0	0	0	0	4	4:15 PM - 4:30 PM	6	1	0	0	0	0	7
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	5	0	0	0	0	0	5
4:45 AM - 5:00 AM	8	0	0	0	0	0	8	4:45 PM - 5:00 PM	9	1	0	0	0	0	10
5:00 AM - 5:15 AM	3	1	0	0	0	0	4	5:00 PM - 5:15 PM	9	0	0	0	0	0	9
5:15 AM - 5:30 AM	3	0	0	0	0	0	3	5:15 PM - 5:30 PM	4	0	0	0	0	0	4
5:30 AM - 5:45 AM	7	1	0	0	0	0	8	5:30 PM - 5:45 PM	8	0	0	0	0	0	8
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	11	0	0	0	0	0	11
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	8	1	0	0	0	0	9
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	3	0	0	0	0	0	3
6:30 AM - 6:45 AM	2	2	0	0	0	0	4	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	4	1	0	0	0	0	5	6:45 PM - 7:00 PM	4	0	0	0	0	0	4
7:00 AM - 7:15 AM	5	0	0	0	0	0	5	7:00 PM - 7:15 PM	4	1	0	0	0	0	5
7:15 AM - 7:30 AM	5	0	0	1	0	0	6	7:15 PM - 7:30 PM	2	0	0	0	0	0	2
7:30 AM - 7:45 AM	7	0	0	0	0	0	7	7:30 PM - 7:45 PM	6	0	0	0	0	0	6
7:45 AM - 8:00 AM	1	2	0	0	0	0	3	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	1	0	0	0	0	0	1	8:00 PM - 8:15 PM	4	1	0	0	0	0	5
8:15 AM - 8:30 AM	4	0	0	0	0	0	4	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	7	0	0	0	0	0	7	8:30 PM - 8:45 PM	5	0	0	0	0	0	5
8:45 AM - 9:00 AM	3	0	0	0	0	0	3	8:45 PM - 9:00 PM	6	0	0	0	0	0	6
9:00 AM - 9:15 AM	6	1	1	0	0	0	8	9:00 PM - 9:15 PM	6	0	0	0	0	0	6
9:15 AM - 9:30 AM	5	0	0	0	0	0	5	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	7	0	0	0	0	0	7	9:30 PM - 9:45 PM	4	0	0	0	0	0	4
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	2	0	0	0	0	0	2
10:00 AM - 10:15 AM	6	0	0	0	0	0	6	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	4	0	0	0	0	0	4	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	3	0	0	0	0	0	3	10:30 PM - 10:45 PM	2	0	0	0	0	0	2
10:45 AM - 11:00 AM	5	0	1	0	0	0	6	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	4	0	0	0	0	0	4	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	4	0	0	0	0	0	4	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	6	0	0	0	0	0	6	11:30 PM - 11:45 PM	2	1	0	0	0	0	3
11:45 AM - 12:00 PM	3	1	0	0	0	0	4	11:45 PM - 12:00 AM	3	0	0	0	0	0	3
Total	157	10	2	1	0	0	170	Total	230	6	0	1	1	0	238
								Total AM + PM	387	16	2	2	1	0	408

Table B-13
Driveway 7 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	6	0	0	0	0	0	6
12:15 AM - 12:30 AM	2	0	0	0	0	0	2	12:15 PM - 12:30 PM	8	0	0	0	0	0	8
12:30 AM - 12:45 AM	2	1	0	0	0	0	3	12:30 PM - 12:45 PM	3	0	0	0	0	0	3
12:45 AM - 1:00 AM	3	0	0	0	0	0	3	12:45 PM - 1:00 PM	4	0	0	0	0	0	4
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	5	0	0	0	0	0	5
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	6	0	0	0	0	0	6
1:30 AM - 1:45 AM	2	0	0	0	0	0	2	1:30 PM - 1:45 PM	4	0	0	0	0	0	4
1:45 AM - 2:00 AM	1	1	0	0	0	0	2	1:45 PM - 2:00 PM	0	0	0	0	0	0	0
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	4	0	0	0	0	0	4
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	0	0	0	0	0	7
2:30 AM - 2:45 AM	1	0	0	0	0	0	1	2:30 PM - 2:45 PM	2	0	0	0	0	0	2
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	2	0	0	0	0	0	2
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	10	1	0	0	0	0	11
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	6	0	0	0	0	0	6
3:30 AM - 3:45 AM	3	0	0	0	0	0	3	3:30 PM - 3:45 PM	5	0	0	0	0	0	5
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	4	1	0	0	0	0	5
4:00 AM - 4:15 AM	3	0	0	0	0	0	3	4:00 PM - 4:15 PM	4	1	0	0	0	0	5
4:15 AM - 4:30 AM	3	1	0	0	0	0	4	4:15 PM - 4:30 PM	1	0	0	0	0	0	1
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	1	0	0	0	0	0	1
4:45 AM - 5:00 AM	5	0	0	0	0	0	5	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	5	0	0	0	0	0	5
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	7	0	0	0	0	0	7
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	4	0	0	0	0	0	4
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	5	1	0	0	0	0	6
6:15 AM - 6:30 AM	0	1	0	0	0	0	1	6:15 PM - 6:30 PM	4	0	0	0	0	0	4
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	9	0	0	0	0	0	9
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	3	0	0	0	0	0	3
7:00 AM - 7:15 AM	4	1	0	0	0	0	5	7:00 PM - 7:15 PM	6	0	0	0	0	0	6
7:15 AM - 7:30 AM	6	0	0	0	0	0	6	7:15 PM - 7:30 PM	4	0	0	0	0	0	4
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	3	0	0	0	0	0	3
7:45 AM - 8:00 AM	2	0	0	0	0	0	2	7:45 PM - 8:00 PM	1	0	0	0	0	0	1
8:00 AM - 8:15 AM	2	0	0	0	0	0	2	8:00 PM - 8:15 PM	7	1	0	0	0	0	8
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	2	0	0	0	0	0	2	8:30 PM - 8:45 PM	5	0	0	0	0	0	5
8:45 AM - 9:00 AM	3	0	0	0	0	0	3	8:45 PM - 9:00 PM	3	0	0	0	0	0	3
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	3	0	0	0	0	0	3
9:15 AM - 9:30 AM	7	0	0	0	0	0	7	9:15 PM - 9:30 PM	6	0	0	0	0	0	6
9:30 AM - 9:45 AM	4	0	0	0	0	0	4	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	6	0	0	0	0	0	6
10:00 AM - 10:15 AM	4	0	0	0	0	0	4	10:00 PM - 10:15 PM	5	0	0	0	0	0	5
10:15 AM - 10:30 AM	6	0	0	0	0	0	6	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	6	1	0	0	0	0	7	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	5	0	0	0	0	0	5	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	5	0	0	0	0	0	5	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	6	0	1	0	0	0	7	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	5	0	0	0	0	0	5	11:30 PM - 11:45 PM	2	0	0	0	0	0	2
11:45 AM - 12:00 PM	7	0	0	0	0	0	7	11:45 PM - 12:00 AM	0	1	0	0	0	0	1
Total	126	6	1	0	0	0	133	Total	201	6	0	0	0	0	207
								Total AM + PM	327	12	1	0	0	0	340

Table B-14
Driveway 7 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	0	0	0	0	0	0	0
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	0	0	0	0	0	0	0
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	0	0	0	0	0	0	0
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	0	0	0	0	0	0	0
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	0	0	0	0	0	0	0
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	0	0	0	0	0	0	0
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	0	0	0	0	0	0	0
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	0	0	0	0	0	0	0
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	0	0	0	0	0	0	0
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	0	0	0	0	0	0	0
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	0	0	0	0	0	0	0
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	0	0	0	0	0	0	0
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	0	0	0	0	0	0	0
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	0	0	0	0	0	0	0
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	0	0	0	0	0	0	0
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	0	0	0	0	0	0	0
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	0	0	0	0	0	0	0
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	0	0	0	0	0	0	0
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	1	0	0	0	0	0	1
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	0	0	0	0	0	0	0
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	0	0	0	0	0	0	0
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	0	0	0	0	0	0	0
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	0	0	0	0	0	0	0
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	0	0	0	0	0	0	0
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	0	0	0	0	0	0	0
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	0	0	0	0	0	0	0
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	0	0	0	0	0	0	0
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	0	0	0	0	0	0	0
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	8:15 PM - 8:30 PM	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	8:30 PM - 8:45 PM	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	0	0	0	0	0	0	0
9:00 AM - 9:15 AM	0	0	0	0	0	0	0	9:00 PM - 9:15 PM	0	0	0	0	0	0	0
9:15 AM - 9:30 AM	0	0	0	0	0	0	0	9:15 PM - 9:30 PM	0	0	0	0	0	0	0
9:30 AM - 9:45 AM	0	0	0	0	0	0	0	9:30 PM - 9:45 PM	0	0	0	0	0	0	0
9:45 AM - 10:00 AM	0	0	0	0	0	0	0	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	10:00 PM - 10:15 PM	0	0	0	0	0	0	0
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	Total	4	0	0	0	0	0	4
								Total AM + PM	4	0	0	0	0	0	4

Table B-15
Driveway 8 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	2	0	0	0	0	0	2	12:00 PM - 12:15 PM	14	0	0	1	0	0	15
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	12	0	0	0	0	0	12
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	12	0	0	0	0	0	12
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	11	0	0	1	0	0	12
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	5	0	0	0	0	0	5
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	11	1	0	0	1	1	14
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	4	1	0	1	0	0	6
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	8	1	0	0	0	0	9
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	4	1	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	0	0	0	0	0	7
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	15	0	0	0	0	0	15
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	0	0	0	0	7
3:00 AM - 3:15 AM	3	0	0	0	0	0	3	3:00 PM - 3:15 PM	16	0	0	0	0	0	16
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	11	0	0	0	0	0	11
3:30 AM - 3:45 AM	1	2	0	0	0	0	3	3:30 PM - 3:45 PM	15	0	0	0	0	0	15
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	15	0	0	0	0	0	15
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	12	0	0	0	0	0	12
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	9	1	0	0	0	0	10
4:45 AM - 5:00 AM	4	0	0	0	0	0	4	4:45 PM - 5:00 PM	6	0	0	0	0	0	6
5:00 AM - 5:15 AM	2	0	0	0	0	0	2	5:00 PM - 5:15 PM	7	0	0	0	0	0	7
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	17	1	0	0	0	0	18
5:30 AM - 5:45 AM	1	1	0	0	0	0	2	5:30 PM - 5:45 PM	12	0	0	0	0	0	12
5:45 AM - 6:00 AM	4	0	0	0	0	0	4	5:45 PM - 6:00 PM	9	1	0	0	0	0	10
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	12	0	0	0	0	0	12
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	15	0	0	0	0	0	15
6:30 AM - 6:45 AM	2	1	0	0	0	0	3	6:30 PM - 6:45 PM	9	0	0	0	0	0	9
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	17	0	0	0	0	0	17
7:00 AM - 7:15 AM	4	0	0	0	0	0	4	7:00 PM - 7:15 PM	16	0	0	0	0	0	16
7:15 AM - 7:30 AM	5	0	0	0	0	0	5	7:15 PM - 7:30 PM	10	0	0	0	0	0	10
7:30 AM - 7:45 AM	6	1	1	0	0	0	8	7:30 PM - 7:45 PM	12	0	0	0	0	0	12
7:45 AM - 8:00 AM	3	2	0	0	0	0	5	7:45 PM - 8:00 PM	7	0	0	0	0	0	7
8:00 AM - 8:15 AM	3	0	0	1	0	0	4	8:00 PM - 8:15 PM	7	0	0	0	0	0	7
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	11	0	0	0	0	0	11
8:30 AM - 8:45 AM	7	0	0	1	0	0	8	8:30 PM - 8:45 PM	4	0	0	0	0	0	4
8:45 AM - 9:00 AM	7	2	1	0	0	0	10	8:45 PM - 9:00 PM	6	0	0	0	0	0	6
9:00 AM - 9:15 AM	6	0	0	0	0	0	6	9:00 PM - 9:15 PM	8	0	0	0	0	0	8
9:15 AM - 9:30 AM	7	1	0	0	0	0	8	9:15 PM - 9:30 PM	18	0	0	0	0	0	18
9:30 AM - 9:45 AM	9	0	0	0	0	0	9	9:30 PM - 9:45 PM	14	0	0	0	0	0	14
9:45 AM - 10:00 AM	8	0	0	0	0	0	8	9:45 PM - 10:00 PM	4	1	0	0	0	0	5
10:00 AM - 10:15 AM	9	0	0	0	0	0	9	10:00 PM - 10:15 PM	9	0	0	0	0	0	9
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	4	0	0	0	0	0	4	10:30 PM - 10:45 PM	9	0	0	0	0	0	9
10:45 AM - 11:00 AM	5	1	0	1	0	0	7	10:45 PM - 11:00 PM	5	0	0	0	0	0	5
11:00 AM - 11:15 AM	7	0	0	0	0	0	7	11:00 PM - 11:15 PM	1	0	0	1	0	0	2
11:15 AM - 11:30 AM	10	0	0	0	0	0	10	11:15 PM - 11:30 PM	4	0	0	0	0	0	4
11:30 AM - 11:45 AM	6	1	0	0	0	0	7	11:30 PM - 11:45 PM	1	1	0	0	0	0	2
11:45 AM - 12:00 PM	15	0	0	1	0	0	16	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	162	12	2	4	0	0	180	Total	452	9	0	4	1	1	467
								Total AM + PM	614	21	2	8	1	1	647

Table B-16
Driveway 8 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	6	0	0	0	0	0	6	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	5	0	0	0	0	0	5	12:15 PM - 12:30 PM	5	0	0	0	0	0	5
12:30 AM - 12:45 AM	2	1	0	0	0	0	3	12:30 PM - 12:45 PM	9	0	0	0	0	0	9
12:45 AM - 1:00 AM	5	0	0	0	0	0	5	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	1	0	0	0	0	0	1
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	6	0	0	0	0	0	6
1:30 AM - 1:45 AM	4	0	0	0	0	0	4	1:30 PM - 1:45 PM	5	0	0	0	0	0	5
1:45 AM - 2:00 AM	2	0	0	0	0	0	2	1:45 PM - 2:00 PM	3	0	0	0	0	0	3
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	7	4	1	0	0	0	12
2:15 AM - 2:30 AM	3	0	0	0	0	0	3	2:15 PM - 2:30 PM	7	1	0	0	0	0	8
2:30 AM - 2:45 AM	2	0	0	0	0	0	2	2:30 PM - 2:45 PM	5	0	0	0	0	0	5
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	7	1	0	0	0	0	8
3:15 AM - 3:30 AM	2	0	0	0	0	0	2	3:15 PM - 3:30 PM	6	0	0	0	0	0	6
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	10	0	0	0	0	0	10
3:45 AM - 4:00 AM	4	0	0	0	0	0	4	3:45 PM - 4:00 PM	6	0	0	0	0	0	6
4:00 AM - 4:15 AM	4	0	0	0	0	0	4	4:00 PM - 4:15 PM	7	0	0	0	0	0	7
4:15 AM - 4:30 AM	4	2	0	0	0	0	6	4:15 PM - 4:30 PM	7	0	0	0	0	0	7
4:30 AM - 4:45 AM	2	4	0	0	0	0	6	4:30 PM - 4:45 PM	6	0	0	0	0	0	6
4:45 AM - 5:00 AM	6	0	0	0	0	0	6	4:45 PM - 5:00 PM	5	0	0	0	0	0	5
5:00 AM - 5:15 AM	3	0	0	0	0	0	3	5:00 PM - 5:15 PM	4	0	0	0	0	0	4
5:15 AM - 5:30 AM	0	2	0	0	0	0	2	5:15 PM - 5:30 PM	7	0	0	0	0	0	7
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	1	1	0	0	0	0	2	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	3	1	0	0	0	0	4	6:00 PM - 6:15 PM	9	0	0	0	0	0	9
6:15 AM - 6:30 AM	6	0	0	0	0	0	6	6:15 PM - 6:30 PM	9	0	0	0	0	0	9
6:30 AM - 6:45 AM	4	0	0	0	0	0	4	6:30 PM - 6:45 PM	11	0	0	0	0	0	11
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	8	0	0	0	0	0	8
7:00 AM - 7:15 AM	2	1	0	0	0	0	3	7:00 PM - 7:15 PM	7	0	0	0	0	0	7
7:15 AM - 7:30 AM	4	1	0	0	0	0	5	7:15 PM - 7:30 PM	8	0	1	0	0	0	9
7:30 AM - 7:45 AM	5	0	0	0	0	0	5	7:30 PM - 7:45 PM	10	0	0	0	0	0	10
7:45 AM - 8:00 AM	3	0	1	0	0	0	4	7:45 PM - 8:00 PM	5	0	0	0	0	0	5
8:00 AM - 8:15 AM	2	3	0	1	0	0	6	8:00 PM - 8:15 PM	11	0	0	0	0	0	11
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	9	0	0	0	0	0	9
8:30 AM - 8:45 AM	4	0	0	0	0	0	4	8:30 PM - 8:45 PM	3	0	0	1	0	0	4
8:45 AM - 9:00 AM	5	0	0	0	0	0	5	8:45 PM - 9:00 PM	4	0	0	0	0	0	4
9:00 AM - 9:15 AM	2	1	1	0	0	0	4	9:00 PM - 9:15 PM	12	0	0	0	0	0	12
9:15 AM - 9:30 AM	9	0	0	0	0	0	9	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	10	1	0	0	0	0	11	9:30 PM - 9:45 PM	12	0	0	0	0	0	12
9:45 AM - 10:00 AM	5	0	0	0	0	0	5	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	9	0	0	0	0	0	9
10:15 AM - 10:30 AM	2	0	0	0	0	0	2	10:15 PM - 10:30 PM	7	0	0	0	0	0	7
10:30 AM - 10:45 AM	6	0	0	0	0	0	6	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	9	1	0	0	0	0	10	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	6	0	0	0	0	0	6	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	8	0	0	0	0	0	8	11:15 PM - 11:30 PM	3	0	0	0	0	0	3
11:30 AM - 11:45 AM	2	0	1	0	0	0	3	11:30 PM - 11:45 PM	4	0	0	0	0	0	4
11:45 AM - 12:00 PM	6	0	0	0	0	0	6	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	175	19	3	1	0	0	198	Total	314	6	2	1	0	0	323
								Total AM + PM	489	25	5	2	0	0	521

Table B-17
Driveway 9 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	4	0	0	0	0	0	4
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	5	0	0	0	0	0	5
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	3	0	0	0	0	0	3
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	4	0	0	0	0	0	4
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	3	0	0	0	0	0	3
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	6	0	0	1	0	0	7
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	2	1	0	0	0	0	3
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	4	0	0	0	0	0	4
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	7	0	0	0	0	0	7
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	9	1	0	0	0	0	10
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	8	0	0	0	0	0	8
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	7	0	0	0	0	0	7
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	8	0	0	0	0	0	8
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	4	0	0	0	0	0	4
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	9	0	0	1	0	0	10
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	5	0	0	0	0	0	5
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	10	0	0	0	0	0	10
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	0	0	1	0	0	10
5:30 AM - 5:45 AM	0	1	0	0	0	0	1	5:30 PM - 5:45 PM	4	0	0	0	0	0	4
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	5	0	0	0	0	0	5
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	6	0	0	0	0	0	6
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	6	0	0	0	0	0	6
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	2	0	0	0	0	0	2
6:45 AM - 7:00 AM	2	0	0	0	0	0	2	6:45 PM - 7:00 PM	3	0	0	0	0	0	3
7:00 AM - 7:15 AM	3	0	0	0	0	0	3	7:00 PM - 7:15 PM	2	0	0	0	0	0	2
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	3	0	0	0	0	0	3
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	2	0	0	0	0	0	2	8:00 PM - 8:15 PM	5	1	0	0	0	0	6
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	4	0	0	0	0	0	4	8:30 PM - 8:45 PM	2	0	0	0	0	0	2
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	2	0	0	0	0	0	2
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	3	0	0	0	0	0	3
9:15 AM - 9:30 AM	5	0	0	0	0	0	5	9:15 PM - 9:30 PM	0	0	0	0	0	0	0
9:30 AM - 9:45 AM	2	0	0	0	0	0	2	9:30 PM - 9:45 PM	3	0	0	0	0	0	3
9:45 AM - 10:00 AM	9	0	0	0	0	0	9	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	4	0	0	0	0	0	4	10:00 PM - 10:15 PM	2	0	0	0	0	0	2
10:15 AM - 10:30 AM	6	0	0	0	0	0	6	10:15 PM - 10:30 PM	2	0	0	0	0	0	2
10:30 AM - 10:45 AM	9	0	0	0	0	0	9	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	6	0	0	0	0	0	6	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	5	0	0	0	0	0	5	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	7	0	0	0	0	0	7	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	5	0	1	0	0	0	6	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	6	0	0	0	0	0	6	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	89	1	1	0	0	0	91	Total	201	3	0	3	0	0	207
								Total AM + PM	290	4	1	3	0	0	298

Table B-18
Driveway 9 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	5	0	0	0	0	0	5
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	5	0	0	0	0	0	5
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	8	0	0	0	0	0	8
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	6	0	0	0	0	0	6
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	4	0	0	0	0	0	4
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	5	0	0	0	0	0	5
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	6	1	0	0	0	0	7
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	0	0	0	6
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	5	1	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	5	0	0	0	0	0	5
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	2	0	0	0	0	0	2
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	4	0	0	0	0	0	4
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	3	1	0	0	0	0	4
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	3	0	0	0	0	0	3
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	4	0	0	0	0	0	4
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	3	1	0	0	0	0	4
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	0	0	0	0	0	0	0
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	5	0	0	0	0	0	5
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	7	0	0	0	0	0	7
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	7	0	0	0	0	0	7
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	10	0	0	0	0	0	10
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	2	0	0	0	0	0	2
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	4	0	0	0	0	0	4
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	10	0	0	0	0	0	10
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	3	0	0	0	0	0	3
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	3	0	0	0	0	0	3
7:30 AM - 7:45 AM	0	0	0	1	0	0	1	7:30 PM - 7:45 PM	2	0	0	0	0	0	2
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	4	0	0	0	0	0	4
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	1	0	0	0	0	0	1
8:15 AM - 8:30 AM	1	1	0	0	0	0	2	8:15 PM - 8:30 PM	3	0	0	0	0	0	3
8:30 AM - 8:45 AM	1	0	0	0	0	0	1	8:30 PM - 8:45 PM	7	0	0	0	0	0	7
8:45 AM - 9:00 AM	2	0	0	0	0	0	2	8:45 PM - 9:00 PM	1	0	0	0	0	0	1
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	4	0	0	0	0	0	4
9:15 AM - 9:30 AM	2	0	0	0	0	0	2	9:15 PM - 9:30 PM	3	0	0	0	0	0	3
9:30 AM - 9:45 AM	0	0	0	0	0	0	0	9:30 PM - 9:45 PM	2	0	0	0	0	0	2
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	3	1	0	0	0	0	4	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	1	0	0	0	0	0	1	10:15 PM - 10:30 PM	5	0	0	0	0	0	5
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	2	0	0	0	0	0	2	10:45 PM - 11:00 PM	2	0	0	0	0	0	2
11:00 AM - 11:15 AM	6	0	0	0	0	0	6	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	1	0	0	0	0	0	1	11:15 PM - 11:30 PM	1	1	0	0	0	0	2
11:30 AM - 11:45 AM	7	0	0	0	0	0	7	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	2	0	0	0	0	0	2	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	51	2	0	1	0	0	54	Total	196	5	0	0	0	0	201
								Total AM + PM	247	7	0	1	0	0	255

Table B-19
Driveway 10 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	11	0	0	0	0	0	11
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	11	0	0	0	0	0	11
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	15	0	0	0	0	0	15
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	4	0	0	0	0	0	4
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	7	1	0	0	0	0	8
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	8	0	0	0	0	0	8
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	5	1	0	0	0	0	6
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	10	0	0	0	0	0	10
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	8	1	0	0	0	0	9
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	6	0	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	6	0	0	0	0	0	6
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	8	0	0	0	0	0	8
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	0	0	0	0	0	8
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	10	0	0	0	0	0	10
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	14	0	0	0	0	0	14
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	13	0	0	0	0	0	13
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	7	0	0	0	0	0	7
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	9	0	0	0	0	0	9
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	10	0	0	0	0	0	10
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	10	0	0	0	0	0	10
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	5	0	0	0	0	0	5
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	15	0	0	0	0	0	15
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	9	1	0	0	0	0	10
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	5	0	0	1	0	0	6
7:00 AM - 7:15 AM	0	0	0	1	0	0	1	7:00 PM - 7:15 PM	8	0	0	0	0	0	8
7:15 AM - 7:30 AM	1	0	0	1	0	0	2	7:15 PM - 7:30 PM	8	0	0	0	0	0	8
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	5	0	0	0	0	0	5
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	10	0	0	0	0	0	10
8:00 AM - 8:15 AM	4	0	0	0	0	0	4	8:00 PM - 8:15 PM	5	0	0	0	0	0	5
8:15 AM - 8:30 AM	2	0	0	0	0	0	2	8:15 PM - 8:30 PM	9	0	0	0	0	0	9
8:30 AM - 8:45 AM	2	0	0	0	0	0	2	8:30 PM - 8:45 PM	7	0	0	0	0	0	7
8:45 AM - 9:00 AM	3	0	0	0	0	0	3	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	7	1	0	0	0	0	8	9:00 PM - 9:15 PM	5	0	0	0	0	0	5
9:15 AM - 9:30 AM	3	0	0	0	0	0	3	9:15 PM - 9:30 PM	3	0	0	0	0	0	3
9:30 AM - 9:45 AM	3	0	0	0	0	0	3	9:30 PM - 9:45 PM	2	0	0	0	0	0	2
9:45 AM - 10:00 AM	6	1	0	0	0	0	7	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	4	1	0	0	0	0	5	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	3	0	0	1	0	0	4	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	5	0	0	0	0	0	5	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	7	0	0	0	0	0	7	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	8	0	0	0	0	0	8	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	12	0	0	0	0	0	12	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	5	0	0	1	0	0	6	11:45 PM - 12:00 AM	0	1	0	0	0	0	1
Total	88	3	0	4	0	0	95	Total	314	5	0	1	0	0	320
								Total AM + PM	402	8	0	5	0	0	415

Table B-20
Driveway 10 (Tuesday, August 15, 2023) - Outbound

Oubound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	3	1	1	0	0	0	5
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	2	1	0	0	0	0	3
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	9	0	0	0	0	0	9
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	8	1	0	0	0	0	9
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	7	0	0	0	0	0	7
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	8	2	0	0	0	0	10
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	12	0	0	0	0	0	12
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	4	1	0	0	0	0	5
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	4	0	0	0	0	0	4
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	8	1	0	0	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	9	0	1	0	0	0	10
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	5	1	0	0	0	0	6
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	11	0	0	0	0	0	11
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	7	0	0	0	0	0	7
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	8	0	0	0	0	0	8
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	4	0	0	0	0	0	4
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	8	0	0	0	0	0	8
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	8	0	0	0	0	0	8
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	5	0	0	0	0	0	5
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	3	0	0	0	0	0	3
6:45 AM - 7:00 AM	2	0	0	0	0	0	2	6:45 PM - 7:00 PM	10	0	0	0	0	0	10
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	4	0	0	0	0	0	4
7:15 AM - 7:30 AM	0	1	0	0	0	0	1	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	1	0	0	0	0	0	1	7:30 PM - 7:45 PM	4	0	0	0	0	0	4
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	5	1	0	0	0	0	6
8:00 AM - 8:15 AM	2	0	0	0	0	0	2	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	1	0	0	0	0	0	1	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	2	0	0	0	0	0	2	8:30 PM - 8:45 PM	4	0	0	0	0	0	4
8:45 AM - 9:00 AM	1	0	0	0	0	0	1	8:45 PM - 9:00 PM	8	0	0	0	0	0	8
9:00 AM - 9:15 AM	1	0	0	0	0	0	1	9:00 PM - 9:15 PM	5	0	0	0	0	0	5
9:15 AM - 9:30 AM	2	0	0	0	0	0	2	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	2	0	0	0	0	0	2	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	2	0	0	0	0	0	2
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	4	0	0	0	0	0	4	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	3	0	0	0	0	0	3	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	2	0	0	0	0	0	2	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	9	0	0	0	0	0	9	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	8	1	0	0	0	0	9	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	4	0	0	0	0	0	4	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	5	0	0	0	0	0	5	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	59	2	0	0	0	0	61	Total	246	9	2	0	0	0	257
								Total AM + PM	305	11	2	0	0	0	318

Table B-21
Driveway 11 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	16	1	0	0	0	0	17
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	17	0	1	0	0	0	18
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	12	1	0	0	0	0	13
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	6	0	0	0	0	0	6
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	6	1	0	0	0	0	7
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	1	0	1	0	0	15
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	11	0	0	0	0	0	11
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	1	0	0	7
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	2	0	0	0	0	0	2
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	4	0	0	0	0	0	4
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	1	1	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	11	0	0	0	0	0	11
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	8	0	0	0	0	0	8
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	5	0	0	0	0	0	5
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	13	0	0	0	0	0	13
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	13	0	0	0	0	0	13
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	10	0	0	0	0	0	10
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	7	1	0	0	0	0	8
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	13	0	0	0	0	0	13
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	9	0	0	0	0	0	9
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	10	0	0	0	0	0	10
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	14	0	0	0	0	0	14
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	16	0	0	0	0	0	16
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	11	0	0	0	0	0	11
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	4	0	0	0	0	0	4
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	14	0	0	0	0	0	14
7:30 AM - 7:45 AM	2	0	0	0	0	0	2	7:30 PM - 7:45 PM	2	0	0	0	0	0	2
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	8	0	0	0	0	0	8
8:00 AM - 8:15 AM	5	0	0	0	0	0	5	8:00 PM - 8:15 PM	9	0	0	0	0	0	9
8:15 AM - 8:30 AM	2	0	0	0	0	0	2	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	7	0	0	0	0	0	7	8:30 PM - 8:45 PM	2	0	0	0	0	0	2
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	4	0	0	0	0	0	4	9:00 PM - 9:15 PM	0	0	0	0	0	0	0
9:15 AM - 9:30 AM	9	1	0	0	0	0	10	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	3	0	0	0	0	0	3	9:30 PM - 9:45 PM	3	0	0	0	0	0	3
9:45 AM - 10:00 AM	2	1	0	0	0	0	3	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	4	0	0	0	0	0	4	10:00 PM - 10:15 PM	2	0	0	0	0	0	2
10:15 AM - 10:30 AM	5	0	0	1	0	0	6	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	6	0	0	0	0	0	6	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	4	0	0	0	0	0	4	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	10	0	0	0	0	0	10	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	6	2	0	0	0	0	8	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	9	0	0	0	0	0	9	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	11	0	0	0	0	0	11	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	101	4	0	1	0	0	106	Total	332	5	2	3	0	0	342
								Total AM + PM	433	9	2	4	0	0	448

Table B-22
Driveway 11 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	5	0	0	0	0	0	5
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	7	1	0	0	0	0	8
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	1	0	0	0	0	0	1
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	6	0	0	1	0	0	7
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	10	0	0	0	0	0	10
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	0	0	0	0	0	13
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	4	0	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	2	1	0	1	0	0	4
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	11	0	0	0	0	0	11
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	4	0	0	0	0	0	4
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	0	0	0	0	7
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	10	0	0	0	0	0	10
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	4	0	0	0	0	0	4
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	9	0	0	0	0	0	9
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	4	1	0	0	0	0	5
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	4	1	0	0	0	0	5
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	4	0	0	0	0	0	4
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	8	0	0	0	0	0	8
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	14	0	0	0	0	0	14
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	0	0	1	0	0	10
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	8	0	0	0	0	0	8
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	7	1	0	0	0	0	8
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	3	0	0	0	0	0	3
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	11	0	0	0	0	0	11
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	9	0	0	0	0	0	9
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	5	0	0	1	0	0	6
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	5	0	0	0	0	0	5
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	10	0	0	0	0	0	10
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	5	0	0	0	0	0	5
8:15 AM - 8:30 AM	5	0	0	1	0	0	6	8:15 PM - 8:30 PM	6	0	0	0	0	0	6
8:30 AM - 8:45 AM	1	0	0	0	0	0	1	8:30 PM - 8:45 PM	10	0	0	0	0	0	10
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	9	0	0	0	0	0	9
9:00 AM - 9:15 AM	4	0	0	0	0	0	4	9:00 PM - 9:15 PM	2	0	0	1	0	0	3
9:15 AM - 9:30 AM	6	1	0	0	0	0	7	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	6	0	0	0	0	0	6	9:30 PM - 9:45 PM	7	0	0	0	0	0	7
9:45 AM - 10:00 AM	4	1	0	0	0	0	5	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	3	1	0	0	0	0	4	10:00 PM - 10:15 PM	4	0	0	0	0	0	4
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	8	0	0	0	0	0	8	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	4	0	0	0	0	0	4	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	6	0	0	0	0	0	6	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	1	0	0	0	0	0	1	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	3	0	0	0	0	0	3	11:30 PM - 11:45 PM	2	0	0	0	0	0	2
11:45 AM - 12:00 PM	5	1	0	0	0	0	6	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	66	4	0	1	0	0	71	Total	279	5	0	5	0	0	289
								Total AM + PM	345	9	0	6	0	0	360

Table B-23
Driveway 12 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	47	0	0	0	0	1	48
12:15 AM - 12:30 AM	2	0	0	0	0	0	2	12:15 PM - 12:30 PM	49	1	0	0	0	1	51
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	54	0	0	0	0	0	54
12:45 AM - 1:00 AM	2	0	0	0	0	0	2	12:45 PM - 1:00 PM	43	0	0	0	0	0	43
1:00 AM - 1:15 AM	3	0	0	0	0	0	3	1:00 PM - 1:15 PM	46	0	0	0	0	1	47
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	46	0	0	0	0	1	47
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	38	1	0	0	0	0	39
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	48	1	0	0	0	1	50
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	30	0	0	0	0	1	31
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	42	0	0	0	0	1	43
2:30 AM - 2:45 AM	1	0	0	0	0	0	1	2:30 PM - 2:45 PM	41	1	0	0	0	0	42
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	43	1	1	0	0	0	45
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	44	0	0	0	0	1	45
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	42	0	0	0	0	1	43
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	51	1	0	0	0	1	53
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	53	0	1	0	0	0	54
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	39	0	0	0	0	1	40
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	49	0	0	0	0	0	49
4:30 AM - 4:45 AM	4	0	0	0	0	0	4	4:30 PM - 4:45 PM	49	0	1	1	0	1	52
4:45 AM - 5:00 AM	6	0	0	0	0	0	6	4:45 PM - 5:00 PM	53	0	0	0	0	1	54
5:00 AM - 5:15 AM	1	1	0	0	0	0	2	5:00 PM - 5:15 PM	33	0	0	0	0	1	34
5:15 AM - 5:30 AM	1	1	0	0	0	0	2	5:15 PM - 5:30 PM	54	0	0	0	0	0	54
5:30 AM - 5:45 AM	3	1	0	0	0	0	4	5:30 PM - 5:45 PM	46	0	0	1	0	0	47
5:45 AM - 6:00 AM	8	0	0	0	0	0	8	5:45 PM - 6:00 PM	35	0	0	0	0	2	37
6:00 AM - 6:15 AM	17	0	0	0	0	0	17	6:00 PM - 6:15 PM	41	0	0	0	0	0	41
6:15 AM - 6:30 AM	10	0	1	0	0	0	11	6:15 PM - 6:30 PM	43	0	0	0	0	0	43
6:30 AM - 6:45 AM	17	0	0	0	0	0	17	6:30 PM - 6:45 PM	38	0	0	0	0	0	38
6:45 AM - 7:00 AM	15	0	0	0	0	1	16	6:45 PM - 7:00 PM	51	0	0	0	0	1	52
7:00 AM - 7:15 AM	18	1	0	0	0	0	19	7:00 PM - 7:15 PM	45	0	0	0	0	0	45
7:15 AM - 7:30 AM	16	0	0	0	0	0	16	7:15 PM - 7:30 PM	28	1	0	0	0	0	29
7:30 AM - 7:45 AM	14	0	0	0	0	0	14	7:30 PM - 7:45 PM	43	0	0	0	0	0	43
7:45 AM - 8:00 AM	16	0	0	0	0	1	17	7:45 PM - 8:00 PM	38	0	0	0	0	0	38
8:00 AM - 8:15 AM	26	0	0	1	0	0	27	8:00 PM - 8:15 PM	44	0	0	1	0	1	46
8:15 AM - 8:30 AM	36	1	0	1	0	0	38	8:15 PM - 8:30 PM	25	1	0	0	0	0	26
8:30 AM - 8:45 AM	32	0	0	0	0	0	32	8:30 PM - 8:45 PM	36	1	0	1	0	0	38
8:45 AM - 9:00 AM	33	0	0	0	0	1	34	8:45 PM - 9:00 PM	30	0	0	0	0	0	30
9:00 AM - 9:15 AM	35	1	0	1	0	1	38	9:00 PM - 9:15 PM	21	0	0	0	0	1	22
9:15 AM - 9:30 AM	37	0	0	0	0	1	38	9:15 PM - 9:30 PM	25	0	0	0	0	0	25
9:30 AM - 9:45 AM	28	0	0	0	0	0	28	9:30 PM - 9:45 PM	21	0	0	0	0	0	21
9:45 AM - 10:00 AM	46	1	0	0	0	0	47	9:45 PM - 10:00 PM	13	0	0	0	0	0	13
10:00 AM - 10:15 AM	46	0	0	0	0	1	47	10:00 PM - 10:15 PM	13	0	0	0	0	0	13
10:15 AM - 10:30 AM	51	0	0	0	0	0	51	10:15 PM - 10:30 PM	11	0	0	0	0	0	11
10:30 AM - 10:45 AM	48	2	0	0	0	1	51	10:30 PM - 10:45 PM	6	0	1	0	0	0	7
10:45 AM - 11:00 AM	42	1	0	0	0	1	44	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	48	0	0	0	0	1	49	11:00 PM - 11:15 PM	2	0	0	0	0	0	2
11:15 AM - 11:30 AM	44	0	0	0	0	0	44	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	46	1	0	0	0	0	47	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	45	0	0	0	0	1	46	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	804	11	1	3	0	10	829	Total	1,659	9	4	4	0	19	1,695
								Total AM + PM	2,463	20	5	7	0	29	2,524

Table B-24
Driveway 12 (Tuesday, August 15, 2023) - Outbound

Oubound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	2	0	0	0	0	0	2	12:00 PM - 12:15 PM	48	0	0	0	0	1	49
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	51	3	0	0	0	1	55
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	45	0	0	0	0	1	46
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	49	1	0	1	0	0	51
1:00 AM - 1:15 AM	4	0	0	0	0	0	4	1:00 PM - 1:15 PM	59	0	0	0	0	0	59
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	42	0	0	0	0	1	43
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	42	1	0	1	0	1	45
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	48	0	0	0	0	0	48
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	52	1	0	0	0	0	53
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	38	1	1	0	0	2	42
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	34	0	0	0	0	1	35
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	49	0	0	1	0	0	50
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	47	1	1	0	0	0	49
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	42	2	0	0	0	1	45
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	42	1	0	0	0	1	44
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	44	1	0	0	0	0	45
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	54	0	0	0	0	1	55
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	45	0	0	0	0	1	46
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	59	0	0	0	0	0	59
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	41	0	0	0	0	1	42
5:00 AM - 5:15 AM	2	1	0	0	0	0	3	5:00 PM - 5:15 PM	55	1	0	1	0	1	58
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	38	0	0	0	0	0	38
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	41	0	0	0	0	0	41
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	57	0	0	0	0	0	57
6:00 AM - 6:15 AM	9	0	0	0	0	1	10	6:00 PM - 6:15 PM	45	1	0	0	0	1	47
6:15 AM - 6:30 AM	8	0	0	0	0	0	8	6:15 PM - 6:30 PM	44	0	0	0	0	1	45
6:30 AM - 6:45 AM	12	0	1	0	0	0	13	6:30 PM - 6:45 PM	35	0	0	0	0	0	35
6:45 AM - 7:00 AM	19	0	0	1	0	0	20	6:45 PM - 7:00 PM	60	1	0	0	0	0	61
7:00 AM - 7:15 AM	18	1	0	0	0	1	20	7:00 PM - 7:15 PM	45	1	0	0	0	0	46
7:15 AM - 7:30 AM	19	1	0	0	0	0	20	7:15 PM - 7:30 PM	41	0	0	1	0	1	43
7:30 AM - 7:45 AM	22	0	0	0	0	0	22	7:30 PM - 7:45 PM	39	0	0	1	0	0	40
7:45 AM - 8:00 AM	16	0	0	0	0	0	16	7:45 PM - 8:00 PM	42	0	0	1	0	0	43
8:00 AM - 8:15 AM	14	0	0	0	0	1	15	8:00 PM - 8:15 PM	39	0	0	0	0	0	39
8:15 AM - 8:30 AM	15	0	0	0	0	0	15	8:15 PM - 8:30 PM	56	0	0	1	0	1	58
8:30 AM - 8:45 AM	32	0	0	0	0	0	32	8:30 PM - 8:45 PM	43	0	0	0	0	0	43
8:45 AM - 9:00 AM	27	0	0	1	0	0	28	8:45 PM - 9:00 PM	33	0	0	0	0	0	33
9:00 AM - 9:15 AM	32	0	0	0	0	1	33	9:00 PM - 9:15 PM	28	0	0	0	0	1	29
9:15 AM - 9:30 AM	29	1	0	0	0	0	30	9:15 PM - 9:30 PM	24	1	0	0	0	0	25
9:30 AM - 9:45 AM	39	1	0	0	0	1	41	9:30 PM - 9:45 PM	24	0	0	0	0	0	24
9:45 AM - 10:00 AM	33	0	0	0	0	0	33	9:45 PM - 10:00 PM	17	0	0	0	0	0	17
10:00 AM - 10:15 AM	41	1	0	0	0	0	42	10:00 PM - 10:15 PM	23	0	0	0	0	0	23
10:15 AM - 10:30 AM	32	0	0	0	0	1	33	10:15 PM - 10:30 PM	18	0	0	0	0	0	18
10:30 AM - 10:45 AM	38	0	0	0	0	0	38	10:30 PM - 10:45 PM	14	0	0	0	0	0	14
10:45 AM - 11:00 AM	45	2	0	0	1	1	49	10:45 PM - 11:00 PM	22	0	0	0	0	0	22
11:00 AM - 11:15 AM	49	1	0	0	0	1	51	11:00 PM - 11:15 PM	13	0	0	0	0	0	13
11:15 AM - 11:30 AM	50	0	0	0	0	0	50	11:15 PM - 11:30 PM	6	0	1	0	0	0	7
11:30 AM - 11:45 AM	42	0	0	0	0	1	43	11:30 PM - 11:45 PM	3	0	0	0	0	0	3
11:45 AM - 12:00 PM	51	0	0	0	0	0	51	11:45 PM - 12:00 AM	6	0	0	0	0	0	6
Total	714	9	1	2	1	9	736	Total	1,842	17	3	8	0	19	1,889
								Total AM + PM	2,556	26	4	10	1	28	2,625

Table B-25
Driveway 13 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	20	0	0	0	0	0	20
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	10	0	0	0	0	0	10
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	19	0	0	0	0	0	19
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	17	0	0	0	0	0	17
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	15	0	0	0	0	0	15
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	25	2	0	1	0	0	28
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	21	0	0	0	0	0	21
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	18	0	0	0	0	0	18
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	20	0	0	0	0	0	20
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	22	1	0	0	0	0	23
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	13	0	0	0	0	0	13
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	17	1	0	0	0	0	18
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	11	0	0	0	0	0	11
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	21	0	0	0	0	0	21
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	14	0	0	0	0	0	14
3:45 AM - 4:00 AM	2	0	0	0	0	0	2	3:45 PM - 4:00 PM	14	1	0	0	0	0	15
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	19	0	0	0	0	0	19
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	23	0	0	0	0	0	23
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	27	0	0	0	0	0	27
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	14	0	0	0	0	0	14
5:00 AM - 5:15 AM	4	0	0	0	0	0	4	5:00 PM - 5:15 PM	20	0	0	0	0	0	20
5:15 AM - 5:30 AM	3	0	0	0	0	0	3	5:15 PM - 5:30 PM	16	0	0	0	0	0	16
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	17	1	0	0	0	0	18
5:45 AM - 6:00 AM	6	0	0	0	0	0	6	5:45 PM - 6:00 PM	13	0	0	0	0	0	13
6:00 AM - 6:15 AM	3	0	0	0	0	0	3	6:00 PM - 6:15 PM	18	0	0	0	0	0	18
6:15 AM - 6:30 AM	10	0	0	0	0	0	10	6:15 PM - 6:30 PM	26	0	0	0	0	0	26
6:30 AM - 6:45 AM	8	0	0	0	0	0	8	6:30 PM - 6:45 PM	20	0	0	1	0	0	21
6:45 AM - 7:00 AM	13	3	0	0	0	0	16	6:45 PM - 7:00 PM	21	0	0	0	0	0	21
7:00 AM - 7:15 AM	4	1	0	0	0	0	5	7:00 PM - 7:15 PM	16	0	0	0	0	0	16
7:15 AM - 7:30 AM	10	0	0	0	0	0	10	7:15 PM - 7:30 PM	15	0	0	0	0	0	15
7:30 AM - 7:45 AM	9	0	0	0	0	0	9	7:30 PM - 7:45 PM	11	0	0	1	0	0	12
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	15	0	0	0	0	0	15
8:00 AM - 8:15 AM	9	0	0	0	0	0	9	8:00 PM - 8:15 PM	19	0	0	0	0	0	19
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	15	0	0	0	0	0	15
8:30 AM - 8:45 AM	9	0	0	0	0	0	9	8:30 PM - 8:45 PM	11	0	0	0	0	0	11
8:45 AM - 9:00 AM	11	0	0	0	0	0	11	8:45 PM - 9:00 PM	17	0	0	0	0	0	17
9:00 AM - 9:15 AM	24	0	0	0	0	0	24	9:00 PM - 9:15 PM	11	1	0	0	0	0	12
9:15 AM - 9:30 AM	11	0	0	0	0	0	11	9:15 PM - 9:30 PM	10	0	0	0	0	0	10
9:30 AM - 9:45 AM	17	0	0	0	0	0	17	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	17	1	0	0	0	0	18	9:45 PM - 10:00 PM	23	0	0	0	0	0	23
10:00 AM - 10:15 AM	20	0	0	0	0	0	20	10:00 PM - 10:15 PM	8	0	0	0	0	0	8
10:15 AM - 10:30 AM	20	0	0	0	0	0	20	10:15 PM - 10:30 PM	6	0	0	0	0	0	6
10:30 AM - 10:45 AM	24	0	0	0	0	0	24	10:30 PM - 10:45 PM	5	0	0	0	0	0	5
10:45 AM - 11:00 AM	18	0	0	0	0	0	18	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	25	0	0	0	0	0	25	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	11	0	0	0	0	0	11	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	26	0	0	1	0	0	27	11:30 PM - 11:45 PM	3	0	0	0	0	0	3
11:45 AM - 12:00 PM	16	0	0	0	0	0	16	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	349	5	0	1	0	0	355	Total	705	7	0	3	0	0	715
								Total AM + PM	1,054	12	0	4	0	0	1,070

Table B-26
Driveway 13 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	4	0	0	0	0	0	4	12:00 PM - 12:15 PM	15	0	0	0	0	0	15
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	13	0	0	0	0	0	13
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	20	0	0	0	0	0	20
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	18	0	0	0	0	0	18
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	14	2	1	0	0	0	17
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	20	0	0	0	0	0	20
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	19	0	0	0	0	0	19
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	24	1	0	0	0	0	25
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	26	0	0	0	0	0	26
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	16	1	0	1	1	0	19
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	17	1	0	0	0	0	18
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	21	0	0	0	0	0	21
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	13	0	0	0	0	0	13
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	19	0	0	0	0	0	19
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	17	0	1	1	0	0	19
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	23	0	0	0	0	0	23
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	28	0	0	0	0	0	28
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	19	0	0	0	0	0	19
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	13	1	0	0	0	0	14
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	27	0	0	0	0	0	27
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	19	0	0	0	0	0	19
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	18	0	0	0	0	0	18
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	23	0	0	0	0	0	23
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	16	0	0	0	0	0	16
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	25	0	0	0	0	0	25
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	16	0	0	0	0	0	16
6:30 AM - 6:45 AM	6	0	0	0	0	0	6	6:30 PM - 6:45 PM	15	0	0	0	0	0	15
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	17	1	0	0	0	0	18
7:00 AM - 7:15 AM	19	1	0	0	0	0	20	7:00 PM - 7:15 PM	14	0	0	0	0	0	14
7:15 AM - 7:30 AM	4	0	0	0	0	0	4	7:15 PM - 7:30 PM	21	0	0	0	0	0	21
7:30 AM - 7:45 AM	3	0	0	0	0	0	3	7:30 PM - 7:45 PM	16	0	0	0	0	0	16
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	23	0	0	0	0	0	23
8:00 AM - 8:15 AM	10	0	0	0	0	0	10	8:00 PM - 8:15 PM	18	0	0	0	0	0	18
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	15	0	0	0	0	0	15
8:30 AM - 8:45 AM	3	0	0	0	0	0	3	8:30 PM - 8:45 PM	15	0	0	0	0	0	15
8:45 AM - 9:00 AM	7	0	0	0	0	0	7	8:45 PM - 9:00 PM	15	0	0	0	0	0	15
9:00 AM - 9:15 AM	10	0	0	0	0	0	10	9:00 PM - 9:15 PM	17	0	0	0	0	0	17
9:15 AM - 9:30 AM	9	1	0	0	0	0	10	9:15 PM - 9:30 PM	18	0	0	0	0	0	18
9:30 AM - 9:45 AM	11	0	0	0	0	0	11	9:30 PM - 9:45 PM	13	0	0	0	0	0	13
9:45 AM - 10:00 AM	13	0	0	0	0	0	13	9:45 PM - 10:00 PM	5	0	0	0	0	0	5
10:00 AM - 10:15 AM	14	2	0	0	0	0	16	10:00 PM - 10:15 PM	13	0	0	0	0	0	13
10:15 AM - 10:30 AM	12	1	0	0	0	0	13	10:15 PM - 10:30 PM	10	0	0	0	0	0	10
10:30 AM - 10:45 AM	17	1	0	0	0	0	18	10:30 PM - 10:45 PM	5	0	0	0	0	0	5
10:45 AM - 11:00 AM	17	0	0	0	0	0	17	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	19	0	0	0	0	0	19	11:00 PM - 11:15 PM	6	0	0	0	0	0	6
11:15 AM - 11:30 AM	24	1	0	0	0	0	25	11:15 PM - 11:30 PM	3	0	0	0	0	0	3
11:30 AM - 11:45 AM	17	0	0	0	0	0	17	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	20	0	0	0	0	0	20	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	260	7	0	0	0	0	267	Total	768	7	2	2	1	0	780
								Total AM + PM	1,028	14	2	2	1	0	1,047

Table B-27
Driveway 14 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	6	0	0	0	0	0	6
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	18	1	0	0	0	0	19
12:30 AM - 12:45 AM	3	0	0	0	0	0	3	12:30 PM - 12:45 PM	12	0	0	0	0	0	12
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	20	0	0	0	0	0	20
1:00 AM - 1:15 AM	0	1	0	0	0	0	1	1:00 PM - 1:15 PM	10	0	0	0	0	0	10
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	7	0	0	0	0	0	7
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	0	0	0	1	0	14
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	15	0	0	0	0	0	15
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	9	0	0	0	0	0	9
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	13	0	0	0	0	0	13
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	11	0	0	0	0	0	11
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	14	1	0	0	0	0	15
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	0	0	0	0	0	8
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	13	0	0	0	0	0	13
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	12	0	0	0	0	0	12
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	15	1	0	0	0	0	16
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	19	1	0	0	0	0	20
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	10	0	0	0	0	0	10
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	16	0	0	0	0	0	16
4:45 AM - 5:00 AM	3	0	0	0	0	0	3	4:45 PM - 5:00 PM	20	0	0	0	0	0	20
5:00 AM - 5:15 AM	2	0	0	0	0	0	2	5:00 PM - 5:15 PM	19	0	0	0	0	0	19
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	18	1	0	0	0	0	19
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	19	1	0	0	0	0	20
6:00 AM - 6:15 AM	3	0	0	0	0	0	3	6:00 PM - 6:15 PM	16	1	0	0	0	0	17
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	9	0	0	0	0	0	9
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	19	0	0	0	0	0	19
6:45 AM - 7:00 AM	8	0	0	0	0	0	8	6:45 PM - 7:00 PM	12	0	0	0	0	0	12
7:00 AM - 7:15 AM	4	1	0	0	0	0	5	7:00 PM - 7:15 PM	8	0	0	0	0	0	8
7:15 AM - 7:30 AM	6	1	0	0	0	0	7	7:15 PM - 7:30 PM	19	0	0	0	0	0	19
7:30 AM - 7:45 AM	4	0	0	0	0	0	4	7:30 PM - 7:45 PM	14	0	0	0	0	0	14
7:45 AM - 8:00 AM	7	0	0	0	0	0	7	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	3	0	0	1	0	0	4	8:00 PM - 8:15 PM	16	1	0	0	0	0	17
8:15 AM - 8:30 AM	9	0	0	0	0	0	9	8:15 PM - 8:30 PM	17	0	0	0	0	0	17
8:30 AM - 8:45 AM	6	0	0	0	0	0	6	8:30 PM - 8:45 PM	6	0	0	1	0	0	7
8:45 AM - 9:00 AM	6	0	0	0	0	0	6	8:45 PM - 9:00 PM	11	0	0	0	0	0	11
9:00 AM - 9:15 AM	9	2	0	0	0	0	11	9:00 PM - 9:15 PM	7	0	0	0	0	0	7
9:15 AM - 9:30 AM	8	2	0	1	0	0	11	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	9	1	0	0	0	0	10	9:30 PM - 9:45 PM	5	0	0	0	0	0	5
9:45 AM - 10:00 AM	11	0	0	0	0	0	11	9:45 PM - 10:00 PM	6	0	0	0	0	0	6
10:00 AM - 10:15 AM	10	1	0	0	0	0	11	10:00 PM - 10:15 PM	6	0	0	0	0	0	6
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	5	0	0	0	0	0	5
10:30 AM - 10:45 AM	7	0	0	0	0	0	7	10:30 PM - 10:45 PM	6	0	0	0	0	0	6
10:45 AM - 11:00 AM	12	0	0	0	0	0	12	10:45 PM - 11:00 PM	2	0	0	0	0	0	2
11:00 AM - 11:15 AM	15	0	0	0	0	0	15	11:00 PM - 11:15 PM	2	0	0	0	0	0	2
11:15 AM - 11:30 AM	9	1	0	1	0	0	11	11:15 PM - 11:30 PM	1	0	0	1	0	0	2
11:30 AM - 11:45 AM	13	0	0	0	0	0	13	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	11	1	0	0	0	0	12	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	195	11	0	3	0	0	209	Total	527	8	0	2	1	0	538
								Total AM + PM	722	19	0	5	1	0	747

Table B-28
Driveway 14 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	4	0	0	0	0	0	4	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	3	0	0	0	0	0	3	12:15 PM - 12:30 PM	15	0	0	0	0	0	15
12:30 AM - 12:45 AM	10	0	0	0	0	0	10	12:30 PM - 12:45 PM	12	0	0	0	0	0	12
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	8	1	0	0	0	0	9
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	10	0	0	0	0	0	10
1:15 AM - 1:30 AM	1	1	0	0	0	0	2	1:15 PM - 1:30 PM	20	0	0	0	0	0	20
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	17	1	0	1	0	0	19
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	11	0	0	0	0	0	11
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	3	0	0	0	0	0	3
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	6	0	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	11	0	0	0	0	0	11
2:45 AM - 3:00 AM	2	0	0	0	0	0	2	2:45 PM - 3:00 PM	11	0	0	0	0	0	11
3:00 AM - 3:15 AM	2	0	0	0	0	0	2	3:00 PM - 3:15 PM	18	0	0	0	0	0	18
3:15 AM - 3:30 AM	2	0	0	0	0	0	2	3:15 PM - 3:30 PM	19	0	0	0	0	0	19
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	10	0	0	0	0	0	10
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	9	0	1	0	0	0	10
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	11	0	0	0	0	0	11
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	16	0	0	0	0	0	16
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	12	1	0	0	0	0	13
5:00 AM - 5:15 AM	1	1	0	0	0	0	2	5:00 PM - 5:15 PM	9	0	0	0	1	0	10
5:15 AM - 5:30 AM	2	1	0	0	0	0	3	5:15 PM - 5:30 PM	17	0	0	0	0	0	17
5:30 AM - 5:45 AM	4	0	0	0	0	0	4	5:30 PM - 5:45 PM	12	1	0	0	0	0	13
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	13	2	0	0	0	0	15
6:00 AM - 6:15 AM	4	1	0	0	0	0	5	6:00 PM - 6:15 PM	13	0	0	0	0	0	13
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	15	0	0	0	0	0	15
6:30 AM - 6:45 AM	2	1	0	0	0	0	3	6:30 PM - 6:45 PM	14	0	0	0	0	0	14
6:45 AM - 7:00 AM	4	0	0	0	0	0	4	6:45 PM - 7:00 PM	16	0	0	0	0	0	16
7:00 AM - 7:15 AM	5	2	0	0	0	0	7	7:00 PM - 7:15 PM	7	0	0	0	0	0	7
7:15 AM - 7:30 AM	4	2	0	0	0	0	6	7:15 PM - 7:30 PM	26	0	0	1	0	0	27
7:30 AM - 7:45 AM	5	0	1	0	0	0	6	7:30 PM - 7:45 PM	14	0	0	0	0	0	14
7:45 AM - 8:00 AM	3	2	0	0	0	0	5	7:45 PM - 8:00 PM	8	1	0	0	0	0	9
8:00 AM - 8:15 AM	7	2	0	1	0	0	10	8:00 PM - 8:15 PM	20	0	0	0	0	0	20
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	12	0	0	0	0	0	12
8:30 AM - 8:45 AM	4	0	0	0	0	0	4	8:30 PM - 8:45 PM	11	0	0	0	0	0	11
8:45 AM - 9:00 AM	9	1	0	0	0	0	10	8:45 PM - 9:00 PM	10	0	0	0	0	0	10
9:00 AM - 9:15 AM	6	0	0	0	0	0	6	9:00 PM - 9:15 PM	11	0	0	0	0	0	11
9:15 AM - 9:30 AM	7	0	0	0	0	0	7	9:15 PM - 9:30 PM	12	0	0	0	0	0	12
9:30 AM - 9:45 AM	6	0	0	0	0	0	6	9:30 PM - 9:45 PM	10	0	0	0	0	0	10
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	10	0	0	0	0	0	10
10:00 AM - 10:15 AM	14	0	0	0	0	0	14	10:00 PM - 10:15 PM	17	0	0	0	0	0	17
10:15 AM - 10:30 AM	4	0	1	0	0	0	5	10:15 PM - 10:30 PM	10	0	0	0	0	0	10
10:30 AM - 10:45 AM	11	0	0	0	0	0	11	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	11	0	0	1	0	0	12	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	5	0	0	0	0	0	5	11:00 PM - 11:15 PM	5	0	0	0	0	0	5
11:15 AM - 11:30 AM	12	0	0	0	0	0	12	11:15 PM - 11:30 PM	4	0	0	0	0	0	4
11:30 AM - 11:45 AM	7	0	0	0	0	0	7	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	17	1	0	0	0	0	18	11:45 PM - 12:00 AM	3	0	0	0	0	0	3
Total	195	15	2	2	0	0	214	Total	546	7	1	2	1	0	557
								Total AM + PM	741	22	3	4	1	0	771

Table B-29
Driveway 15 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	27	0	0	0	0	0	27
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	20	0	0	0	0	0	20
12:30 AM - 12:45 AM	3	0	0	0	0	0	3	12:30 PM - 12:45 PM	15	1	0	0	0	0	16
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	12	1	0	0	0	0	13
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	11	1	0	0	0	0	12
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	11	0	0	0	0	0	11
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	16	0	0	0	0	0	16
1:45 AM - 2:00 AM	0	0	0	1	0	0	1	1:45 PM - 2:00 PM	13	0	0	0	0	0	13
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	15	0	0	0	0	0	15
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	10	0	0	0	0	0	10
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	13	1	0	0	0	0	14
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	16	0	0	0	0	0	16
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	11	1	0	0	0	0	12
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	15	0	0	0	0	0	15
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	11	0	0	0	0	0	11
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	3	0	0	0	0	0	3
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	14	0	0	0	0	0	14
4:15 AM - 4:30 AM	0	0	0	1	0	0	1	4:15 PM - 4:30 PM	0	0	0	0	0	0	0
4:30 AM - 4:45 AM	4	0	0	0	0	0	4	4:30 PM - 4:45 PM	12	0	0	0	0	0	12
4:45 AM - 5:00 AM	3	0	0	0	0	0	3	4:45 PM - 5:00 PM	17	0	0	0	0	0	17
5:00 AM - 5:15 AM	5	0	0	0	0	0	5	5:00 PM - 5:15 PM	15	0	0	0	0	0	15
5:15 AM - 5:30 AM	1	0	0	0	0	0	1	5:15 PM - 5:30 PM	17	0	0	0	0	0	17
5:30 AM - 5:45 AM	4	0	0	0	0	0	4	5:30 PM - 5:45 PM	18	0	0	0	0	0	18
5:45 AM - 6:00 AM	6	0	0	0	0	0	6	5:45 PM - 6:00 PM	23	0	0	0	0	0	23
6:00 AM - 6:15 AM	6	0	0	0	0	0	6	6:00 PM - 6:15 PM	14	0	0	0	0	0	14
6:15 AM - 6:30 AM	3	0	0	0	0	0	3	6:15 PM - 6:30 PM	19	0	0	0	0	0	19
6:30 AM - 6:45 AM	11	1	0	0	0	0	12	6:30 PM - 6:45 PM	16	0	0	0	0	0	16
6:45 AM - 7:00 AM	9	0	0	0	0	0	9	6:45 PM - 7:00 PM	16	1	0	0	0	0	17
7:00 AM - 7:15 AM	12	0	0	0	0	0	12	7:00 PM - 7:15 PM	19	0	0	0	0	0	19
7:15 AM - 7:30 AM	10	0	0	0	0	0	10	7:15 PM - 7:30 PM	13	0	0	0	0	0	13
7:30 AM - 7:45 AM	12	0	0	0	0	0	12	7:30 PM - 7:45 PM	17	0	0	0	0	0	17
7:45 AM - 8:00 AM	15	1	0	0	0	0	16	7:45 PM - 8:00 PM	17	0	0	0	0	0	17
8:00 AM - 8:15 AM	13	0	0	0	0	0	13	8:00 PM - 8:15 PM	10	0	0	0	0	0	10
8:15 AM - 8:30 AM	10	0	0	0	0	0	10	8:15 PM - 8:30 PM	10	0	0	0	0	0	10
8:30 AM - 8:45 AM	9	0	0	0	0	0	9	8:30 PM - 8:45 PM	9	0	0	0	0	0	9
8:45 AM - 9:00 AM	17	1	1	0	0	0	19	8:45 PM - 9:00 PM	9	0	0	0	0	0	9
9:00 AM - 9:15 AM	14	0	0	0	0	0	14	9:00 PM - 9:15 PM	7	0	0	0	0	0	7
9:15 AM - 9:30 AM	7	0	1	0	0	0	8	9:15 PM - 9:30 PM	4	0	0	0	0	0	4
9:30 AM - 9:45 AM	9	1	0	0	0	0	10	9:30 PM - 9:45 PM	11	0	0	0	0	0	11
9:45 AM - 10:00 AM	11	0	0	0	0	0	11	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	12	0	0	0	0	0	12	10:00 PM - 10:15 PM	5	0	0	0	0	0	5
10:15 AM - 10:30 AM	17	0	0	0	0	0	17	10:15 PM - 10:30 PM	5	0	0	0	0	0	5
10:30 AM - 10:45 AM	15	0	0	0	0	0	15	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	10	4	0	0	0	0	14	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	13	1	0	0	0	0	14	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	16	1	0	0	0	0	17	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	5	0	0	0	0	0	5	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	13	0	0	0	0	0	13	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	303	10	2	2	0	0	317	Total	550	6	0	0	0	0	556
								Total AM + PM	853	16	2	2	0	0	873

Table B-30
Driveway 15 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	7	0	0	0	0	0	7	12:00 PM - 12:15 PM	9	0	0	0	0	0	9
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	22	0	0	0	0	0	22
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	10	0	0	0	0	0	10
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	15	0	0	0	0	0	15
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	15	0	0	0	0	0	15
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	16	2	0	0	0	0	18
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	0	0	0	0	0	13
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	20	1	0	0	0	0	21
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	11	0	0	0	0	0	11
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	14	0	0	0	0	0	14
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	13	0	0	0	0	0	13
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	9	0	0	0	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	10	1	0	0	0	0	11
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	8	0	0	0	0	0	8
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	12	1	0	0	0	0	13
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	7	0	0	0	0	0	7
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	0	0	0	0	0	0	0
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	10	1	0	0	0	0	11
4:45 AM - 5:00 AM	5	0	0	0	0	0	5	4:45 PM - 5:00 PM	16	0	0	0	0	0	16
5:00 AM - 5:15 AM	2	0	0	0	0	0	2	5:00 PM - 5:15 PM	12	0	0	0	0	0	12
5:15 AM - 5:30 AM	3	0	0	0	0	0	3	5:15 PM - 5:30 PM	14	0	0	0	0	0	14
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	19	2	0	0	0	0	21
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	13	0	0	0	0	0	13
6:00 AM - 6:15 AM	4	0	0	0	0	0	4	6:00 PM - 6:15 PM	16	0	0	0	0	0	16
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	15	0	0	0	0	0	15
6:30 AM - 6:45 AM	6	1	0	0	0	0	7	6:30 PM - 6:45 PM	15	0	0	0	0	0	15
6:45 AM - 7:00 AM	8	1	0	1	0	0	10	6:45 PM - 7:00 PM	19	0	0	0	0	0	19
7:00 AM - 7:15 AM	6	0	0	0	0	0	6	7:00 PM - 7:15 PM	16	0	0	0	0	0	16
7:15 AM - 7:30 AM	6	0	0	0	0	0	6	7:15 PM - 7:30 PM	3	0	0	0	0	0	3
7:30 AM - 7:45 AM	18	0	0	1	0	0	19	7:30 PM - 7:45 PM	13	1	0	0	0	0	14
7:45 AM - 8:00 AM	10	1	0	0	0	0	11	7:45 PM - 8:00 PM	13	0	0	0	0	0	13
8:00 AM - 8:15 AM	6	0	0	0	0	0	6	8:00 PM - 8:15 PM	14	0	0	0	0	0	14
8:15 AM - 8:30 AM	7	0	0	0	0	0	7	8:15 PM - 8:30 PM	18	0	0	0	0	0	18
8:30 AM - 8:45 AM	5	0	0	1	0	0	6	8:30 PM - 8:45 PM	16	0	0	0	0	0	16
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	10	0	0	0	0	0	10
9:00 AM - 9:15 AM	15	0	0	0	0	0	15	9:00 PM - 9:15 PM	8	0	0	0	0	0	8
9:15 AM - 9:30 AM	6	0	1	0	0	0	7	9:15 PM - 9:30 PM	12	0	0	0	0	0	12
9:30 AM - 9:45 AM	14	1	0	0	0	0	15	9:30 PM - 9:45 PM	5	0	0	0	0	0	5
9:45 AM - 10:00 AM	7	0	0	0	0	0	7	9:45 PM - 10:00 PM	9	0	0	0	0	0	9
10:00 AM - 10:15 AM	11	0	0	0	0	0	11	10:00 PM - 10:15 PM	6	0	0	0	0	0	6
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	7	0	0	0	0	0	7	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	6	0	0	0	0	0	6	10:45 PM - 11:00 PM	6	0	0	0	0	0	6
11:00 AM - 11:15 AM	12	0	0	0	0	0	12	11:00 PM - 11:15 PM	4	0	0	0	0	0	4
11:15 AM - 11:30 AM	7	0	0	0	0	0	7	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	18	0	0	0	0	0	18	11:30 PM - 11:45 PM	2	0	0	0	0	0	2
11:45 AM - 12:00 PM	15	5	0	0	0	0	20	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	229	9	1	3	0	0	242	Total	527	9	0	0	0	0	536
								Total AM + PM	756	18	1	3	0	0	778

Table B-31
Driveway 16 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	12	0	0	0	0	0	12
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	11	1	0	0	0	0	12
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	10	0	0	0	0	0	10
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	10	0	0	0	0	0	10
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	9	2	0	0	0	0	11
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	8	0	0	0	0	0	8
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	7	0	0	1	0	0	8
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	6	0	0	1	0	0	7
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	0	0	0	6
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	3	0	0	0	0	0	3
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	6	1	0	0	0	0	7
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	12	0	0	0	0	0	12
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	1	0	0	0	0	9
3:15 AM - 3:30 AM	0	2	0	0	0	0	2	3:15 PM - 3:30 PM	4	0	0	0	1	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	6	0	0	0	0	0	6
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	6	0	0	0	0	0	6
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	7	0	0	0	0	0	7
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	10	0	0	0	0	0	10
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	7	0	0	0	0	0	7
4:45 AM - 5:00 AM	3	0	0	0	0	0	3	4:45 PM - 5:00 PM	11	0	0	0	0	0	11
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	9	0	0	0	0	0	9
5:15 AM - 5:30 AM	3	0	0	1	0	0	4	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	8	0	0	0	0	0	8
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	8	0	0	0	0	0	8
6:30 AM - 6:45 AM	3	0	0	0	0	0	3	6:30 PM - 6:45 PM	3	0	0	0	0	0	3
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	4	0	0	0	0	0	4	7:00 PM - 7:15 PM	5	0	0	0	0	0	5
7:15 AM - 7:30 AM	4	0	0	0	0	0	4	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	10	0	0	0	0	0	10	7:30 PM - 7:45 PM	11	0	0	0	0	0	11
7:45 AM - 8:00 AM	10	0	0	0	0	0	10	7:45 PM - 8:00 PM	5	0	0	0	0	0	5
8:00 AM - 8:15 AM	7	0	0	1	0	0	8	8:00 PM - 8:15 PM	2	0	0	0	0	0	2
8:15 AM - 8:30 AM	7	1	0	1	0	0	9	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	12	0	0	0	0	0	12	8:30 PM - 8:45 PM	3	0	0	0	0	0	3
8:45 AM - 9:00 AM	13	1	0	0	0	0	14	8:45 PM - 9:00 PM	2	0	0	0	0	0	2
9:00 AM - 9:15 AM	6	0	0	0	0	0	6	9:00 PM - 9:15 PM	2	0	0	0	0	0	2
9:15 AM - 9:30 AM	6	0	0	0	0	0	6	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	8	0	0	0	0	0	8	9:30 PM - 9:45 PM	1	0	0	0	0	0	1
9:45 AM - 10:00 AM	8	0	0	0	0	0	8	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	12	0	0	0	0	0	12	10:15 PM - 10:30 PM	2	0	0	0	0	0	2
10:30 AM - 10:45 AM	8	0	0	0	0	0	8	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	5	1	0	0	0	0	6	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	1	0	0	0	0	0	1	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	15	0	0	0	0	0	15	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	12	1	0	0	0	0	13	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	11	1	0	0	0	0	12	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	182	7	0	3	0	0	192	Total	276	5	0	2	1	0	284
								Total AM + PM	458	12	0	5	1	0	476

Table B-32
Driveway 16 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	9	0	0	0	0	0	9
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	13	0	0	0	0	0	13
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	11	0	0	0	0	0	11
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	14	0	0	0	0	0	14
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	13	3	0	0	0	0	16
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	6	1	0	0	0	0	7
1:30 AM - 1:45 AM	2	0	0	0	0	0	2	1:30 PM - 1:45 PM	8	0	0	0	0	0	8
1:45 AM - 2:00 AM	2	0	0	0	0	0	2	1:45 PM - 2:00 PM	9	0	0	0	0	0	9
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	1	0	0	7
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	15	0	0	0	0	0	15
2:30 AM - 2:45 AM	0	0	0	1	0	0	1	2:30 PM - 2:45 PM	5	0	0	1	0	0	6
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	0	0	0	0	7
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	7	0	0	0	0	0	7
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	7	0	0	0	0	0	7
3:30 AM - 3:45 AM	0	2	0	0	0	0	2	3:30 PM - 3:45 PM	8	0	1	0	0	0	9
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	7	0	0	0	0	0	7
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	4	0	0	0	0	0	4
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	5	1	0	0	0	0	6
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	7	0	0	0	1	0	8
4:45 AM - 5:00 AM	2	0	0	0	0	0	2	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	3	0	0	0	0	0	3	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	5	0	0	0	0	0	5
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	7	0	0	0	0	0	7
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	5	0	0	0	0	0	5	6:00 PM - 6:15 PM	12	0	0	0	0	0	12
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	4	0	0	0	0	0	4
6:30 AM - 6:45 AM	4	0	0	0	0	0	4	6:30 PM - 6:45 PM	5	0	0	0	0	0	5
6:45 AM - 7:00 AM	2	0	0	0	0	0	2	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	6	0	0	0	0	0	6	7:00 PM - 7:15 PM	6	0	0	0	0	0	6
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	2	0	0	0	0	0	2	7:30 PM - 7:45 PM	9	0	0	0	0	0	9
7:45 AM - 8:00 AM	5	0	0	0	0	0	5	7:45 PM - 8:00 PM	4	0	0	0	0	0	4
8:00 AM - 8:15 AM	5	0	0	0	0	0	5	8:00 PM - 8:15 PM	4	1	0	0	0	0	5
8:15 AM - 8:30 AM	6	0	0	0	0	0	6	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	8	0	0	0	0	0	8	8:30 PM - 8:45 PM	9	0	0	0	0	0	9
8:45 AM - 9:00 AM	4	0	1	1	0	0	6	8:45 PM - 9:00 PM	4	0	0	0	0	0	4
9:00 AM - 9:15 AM	7	0	0	0	0	0	7	9:00 PM - 9:15 PM	2	0	0	0	0	0	2
9:15 AM - 9:30 AM	5	1	0	0	0	0	6	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	6	0	0	0	0	0	6	9:30 PM - 9:45 PM	3	0	0	0	0	0	3
9:45 AM - 10:00 AM	5	0	1	0	0	0	6	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	5	0	0	0	0	0	5
10:15 AM - 10:30 AM	9	0	0	0	0	0	9	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	5	0	0	0	0	0	5
10:45 AM - 11:00 AM	6	1	0	0	0	0	7	10:45 PM - 11:00 PM	3	0	0	0	0	0	3
11:00 AM - 11:15 AM	10	0	0	0	0	0	10	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	6	0	0	0	0	0	6	11:15 PM - 11:30 PM	3	0	0	0	0	0	3
11:30 AM - 11:45 AM	14	0	0	0	0	0	14	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	6	1	0	0	0	0	7	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	152	5	2	2	0	0	161	Total	301	6	1	2	1	0	311
								Total AM + PM	453	11	3	4	1	0	472

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY1 Western dwy south of Bear Valley Rd (west of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	47	0	0	0	0	0	47
0:15	4	0	0	0	0	0	4	12:15	45	2	0	0	0	0	47
0:30	0	0	0	0	0	0	0	12:30	58	0	0	0	0	0	58
0:45	0	0	0	1	0	0	1	12:45	46	4	0	0	0	0	50
1:00	0	0	0	0	0	0	0	13:00	53	0	0	0	0	0	53
1:15	0	0	0	0	0	0	0	13:15	60	0	0	0	1	0	61
1:30	0	0	0	1	0	0	1	13:30	35	2	1	1	0	0	39
1:45	2	0	0	0	0	0	2	13:45	48	1	1	0	0	0	50
2:00	0	0	0	0	0	0	0	14:00	42	0	0	0	0	0	42
2:15	1	0	0	0	0	0	1	14:15	51	3	0	0	0	0	54
2:30	0	0	0	0	0	0	0	14:30	33	1	1	0	0	0	35
2:45	0	0	0	0	0	0	0	14:45	60	0	0	0	0	0	60
3:00	0	0	0	0	0	0	0	15:00	40	0	0	0	0	0	40
3:15	2	1	0	0	0	0	3	15:15	56	0	0	0	0	0	56
3:30	1	0	0	1	0	0	2	15:30	68	2	0	0	0	0	70
3:45	2	0	0	0	0	0	2	15:45	59	0	0	0	0	0	59
4:00	0	0	0	0	0	0	0	16:00	40	0	0	0	0	0	40
4:15	2	0	0	0	0	0	2	16:15	46	1	1	0	0	0	48
4:30	3	0	0	0	0	0	3	16:30	58	0	0	0	0	0	58
4:45	7	0	0	0	0	0	7	16:45	56	1	0	0	0	0	57
5:00	1	3	0	0	0	0	4	17:00	47	0	0	0	0	0	47
5:15	4	0	0	0	0	0	4	17:15	47	0	0	0	0	0	47
5:30	7	0	0	0	0	0	7	17:30	44	0	0	0	0	0	44
5:45	7	0	0	0	0	0	7	17:45	51	1	0	0	0	0	52
6:00	3	0	0	1	0	0	4	18:00	38	1	1	1	0	0	41
6:15	8	0	0	0	0	0	8	18:15	50	0	0	0	0	0	50
6:30	15	0	0	0	0	0	15	18:30	50	1	0	0	0	0	51
6:45	17	1	2	0	0	0	20	18:45	37	0	0	1	0	0	38
7:00	13	0	1	0	1	0	15	19:00	33	1	0	0	0	0	34
7:15	18	1	0	0	0	0	19	19:15	36	0	0	0	0	0	36
7:30	14	1	0	0	0	0	15	19:30	38	0	0	0	0	0	38
7:45	25	0	0	0	0	0	25	19:45	27	0	0	0	0	0	27
8:00	20	1	0	0	0	0	21	20:00	28	0	0	0	0	0	28
8:15	19	0	0	1	0	0	20	20:15	25	0	0	1	0	0	26
8:30	29	0	0	1	0	0	30	20:30	20	0	0	0	0	0	20
8:45	38	0	0	0	0	0	38	20:45	22	0	0	0	0	0	22
9:00	45	1	0	2	0	0	48	21:00	14	0	0	0	0	0	14
9:15	46	2	0	0	0	0	48	21:15	7	0	0	0	0	0	7
9:30	37	1	0	1	0	0	39	21:30	7	0	0	1	0	0	8
9:45	42	2	0	1	0	0	45	21:45	13	0	0	1	0	0	14
10:00	54	1	0	1	0	0	56	22:00	6	0	0	0	0	0	6
10:15	46	1	0	0	0	1	48	22:15	5	0	0	1	0	0	6
10:30	46	1	1	0	0	0	48	22:30	10	0	0	0	0	0	10
10:45	40	2	1	0	0	0	43	22:45	6	0	0	0	0	0	6
11:00	45	0	0	0	0	0	45	23:00	6	0	0	0	0	0	6
11:15	52	0	0	1	0	0	53	23:15	4	0	0	0	0	0	4
11:30	42	3	0	1	0	1	47	23:30	1	0	0	0	0	0	1
11:45	51	1	0	0	0	0	52	23:45	1	0	0	0	0	0	1
TOTAL	808	23	5	13	1	2	852	**TOTAL**	1,674	21	5	7	1	0	1,708

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	197

AM PEAK HOUR	2:45 PM
AM PEAK VOLUME	226

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	2,482	44	10	20	2	2	2,560
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	97.0%	1.7%	0.4%	0.8%	0.1%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	5,485	86	18	38	2	4	5,633
CLASS 6	Buses	**% OF TOTAL**	97.4%	1.5%	0.3%	0.7%	0.0%	0.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY1 Western dwy south of Bear Valley Rd (west of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	9	0	0	0	0	0	9
0:15	3	0	0	0	0	0	3
0:30	4	0	0	0	0	0	4
0:45	0	0	0	0	0	0	0
1:00	3	0	0	0	0	0	3
1:15	4	0	0	0	0	0	4
1:30	0	0	0	0	0	0	0
1:45	0	0	0	1	0	0	1
2:00	1	0	0	0	0	0	1
2:15	0	0	0	1	0	0	1
2:30	1	0	0	0	0	0	1
2:45	1	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	3	0	0	0	0	0	3
3:45	2	1	0	0	0	0	3
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	1	0	0	0	0	0	1
5:00	1	0	0	0	0	0	1
5:15	1	0	0	0	0	0	1
5:30	3	2	0	0	0	0	5
5:45	1	0	0	0	0	0	1
6:00	1	0	0	1	0	0	2
6:15	6	0	0	0	0	0	6
6:30	3	0	0	0	0	0	3
6:45	9	1	1	0	0	0	11
7:00	10	1	0	0	0	0	11
7:15	17	1	0	0	0	0	18
7:30	16	1	0	0	0	0	17
7:45	21	1	0	1	0	0	23
8:00	14	0	0	0	0	0	14
8:15	23	1	0	1	0	0	25
8:30	23	0	1	1	0	0	25
8:45	30	0	0	1	0	0	31
9:00	30	0	1	1	0	1	33
9:15	26	0	0	0	0	0	26
9:30	39	1	0	0	0	0	40
9:45	43	0	0	1	0	0	44
10:00	36	2	0	0	0	0	38
10:15	35	1	0	1	0	0	37
10:30	46	3	1	1	0	0	51
10:45	57	1	0	0	0	0	58
11:00	51	1	0	0	0	0	52
11:15	56	1	0	0	0	0	57
11:30	35	0	0	0	0	0	35
11:45	47	0	0	0	0	1	48
TOTAL	712	19	4	11	0	2	748

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	218

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	63	0	0	0	0	0	63
12:15	66	2	0	0	0	0	68
12:30	63	0	0	0	0	0	63
12:45	67	1	0	1	0	0	69
13:00	56	0	0	0	0	0	56
13:15	59	0	0	0	0	0	59
13:30	58	0	0	0	0	0	58
13:45	59	1	1	2	0	0	63
14:00	59	1	0	0	0	0	60
14:15	67	0	0	0	0	0	67
14:30	54	1	1	0	0	0	56
14:45	64	3	1	0	0	0	68
15:00	55	1	0	0	0	0	56
15:15	55	0	0	0	0	0	55
15:30	62	1	0	0	0	0	63
15:45	65	2	0	0	0	0	67
16:00	59	1	0	0	0	0	60
16:15	75	0	0	0	0	0	75
16:30	64	0	1	1	0	0	66
16:45	66	1	0	0	0	0	67
17:00	62	1	0	0	0	0	63
17:15	59	0	0	1	0	0	60
17:30	57	0	0	0	0	0	57
17:45	64	1	0	0	0	0	65
18:00	68	2	0	0	0	0	70
18:15	64	1	0	0	0	0	65
18:30	71	0	0	0	0	0	71
18:45	44	0	0	0	0	0	44
19:00	52	1	0	0	0	0	53
19:15	59	0	0	0	0	0	59
19:30	46	1	0	0	0	0	47
19:45	49	0	0	0	0	0	49
20:00	56	0	0	0	0	0	56
20:15	53	0	0	0	0	0	53
20:30	45	0	0	0	0	0	45
20:45	38	0	0	0	0	0	38
21:00	33	0	0	0	0	0	33
21:15	22	0	0	0	0	0	22
21:30	21	0	0	0	0	0	21
21:45	16	0	0	0	0	0	16
22:00	20	0	0	0	0	0	20
22:15	10	0	0	1	0	0	11
22:30	9	0	0	0	0	0	9
22:45	10	1	0	1	0	0	12
23:00	15	0	0	0	0	0	15
23:15	7	0	0	0	0	0	7
23:30	3	0	0	0	0	0	3
23:45	2	0	0	0	0	0	2
TOTAL	2,291	23	4	7	0	0	2,325

AM PEAK HOUR	5:45 PM
AM PEAK VOLUME	271

TOTAL: AM+PM	3,003	42	8	18	0	2	3,073
% OF TOTAL	97.7%	1.4%	0.3%	0.6%	0.0%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY1 Western dwy south of Bear Valley Rd (west of Mall Blvd)

AM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL
0:00	9	0	0	0	0	0	9
0:15	7	0	0	0	0	0	7
0:30	4	0	0	0	0	0	4
0:45	0	0	0	1	0	0	1
1:00	3	0	0	0	0	0	3
1:15	4	0	0	0	0	0	4
1:30	0	0	0	1	0	0	1
1:45	2	0	0	1	0	0	3
2:00	1	0	0	0	0	0	1
2:15	1	0	0	1	0	0	2
2:30	1	0	0	0	0	0	1
2:45	1	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0
3:15	2	1	0	0	0	0	3
3:30	4	0	0	1	0	0	5
3:45	4	1	0	0	0	0	5
4:00	0	0	0	0	0	0	0
4:15	2	0	0	0	0	0	2
4:30	3	0	0	0	0	0	3
4:45	8	0	0	0	0	0	8
5:00	2	3	0	0	0	0	5
5:15	5	0	0	0	0	0	5
5:30	10	2	0	0	0	0	12
5:45	8	0	0	0	0	0	8
6:00	4	0	0	2	0	0	6
6:15	14	0	0	0	0	0	14
6:30	18	0	0	0	0	0	18
6:45	26	2	3	0	0	0	31
7:00	23	1	1	0	1	0	26
7:15	35	2	0	0	0	0	37
7:30	30	2	0	0	0	0	32
7:45	46	1	0	1	0	0	48
8:00	34	1	0	0	0	0	35
8:15	42	1	0	2	0	0	45
8:30	52	0	1	2	0	0	55
8:45	68	0	0	1	0	0	69
9:00	75	1	1	3	0	1	81
9:15	72	2	0	0	0	0	74
9:30	76	2	0	1	0	0	79
9:45	85	2	0	2	0	0	89
10:00	90	3	0	1	0	0	94
10:15	81	2	0	1	0	1	85
10:30	92	4	2	1	0	0	99
10:45	97	3	1	0	0	0	101
11:00	96	1	0	0	0	0	97
11:15	108	1	0	1	0	0	110
11:30	77	3	0	1	0	1	82
11:45	98	1	0	0	0	1	100
TOTAL	1,520	42	9	24	1	4	1,600

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	407

PM	COMBINED						
Time	1	2	3	4	5	6	TOTAL
12:00	110	0	0	0	0	0	110
12:15	111	4	0	0	0	0	115
12:30	121	0	0	0	0	0	121
12:45	113	5	0	1	0	0	119
13:00	109	0	0	0	0	0	109
13:15	119	0	0	0	1	0	120
13:30	93	2	1	1	0	0	97
13:45	107	2	2	2	0	0	113
14:00	101	1	0	0	0	0	102
14:15	118	3	0	0	0	0	121
14:30	87	2	2	0	0	0	91
14:45	124	3	1	0	0	0	128
15:00	95	1	0	0	0	0	96
15:15	111	0	0	0	0	0	111
15:30	130	3	0	0	0	0	133
15:45	124	2	0	0	0	0	126
16:00	99	1	0	0	0	0	100
16:15	121	1	1	0	0	0	123
16:30	122	0	1	1	0	0	124
16:45	122	2	0	0	0	0	124
17:00	109	1	0	0	0	0	110
17:15	106	0	0	1	0	0	107
17:30	101	0	0	0	0	0	101
17:45	115	2	0	0	0	0	117
18:00	106	3	1	1	0	0	111
18:15	114	1	0	0	0	0	115
18:30	121	1	0	0	0	0	122
18:45	81	0	0	1	0	0	82
19:00	85	2	0	0	0	0	87
19:15	95	0	0	0	0	0	95
19:30	84	1	0	0	0	0	85
19:45	76	0	0	0	0	0	76
20:00	84	0	0	0	0	0	84
20:15	78	0	0	1	0	0	79
20:30	65	0	0	0	0	0	65
20:45	60	0	0	0	0	0	60
21:00	47	0	0	0	0	0	47
21:15	29	0	0	0	0	0	29
21:30	28	0	0	1	0	0	29
21:45	29	0	0	1	0	0	30
22:00	26	0	0	0	0	0	26
22:15	15	0	0	2	0	0	17
22:30	19	0	0	0	0	0	19
22:45	16	1	0	1	0	0	18
23:00	21	0	0	0	0	0	21
23:15	11	0	0	0	0	0	11
23:30	4	0	0	0	0	0	4
23:45	3	0	0	0	0	0	3
TOTAL	3,965	44	9	14	1	0	4,033

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	482

TOTAL: AM+PM	5,485	86	18	38	2	4	5,633
% OF TOTAL	97.4%	1.5%	0.3%	0.7%	0.0%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY2 Middle dwy south of Bear Valley Rd (west of Mall Blvd)

AM	IN							PM	IN						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	0	0	0	0	0	0	0
0:15	1	0	0	0	0	0	1	12:15	2	0	0	0	0	0	2
0:30	0	0	0	0	0	0	0	12:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0	12:45	2	0	0	0	0	0	2
1:00	0	0	0	0	0	0	0	13:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0	13:15	3	0	0	0	0	0	3
1:30	0	0	0	0	0	0	0	13:30	2	0	0	0	0	0	2
1:45	0	0	0	0	0	0	0	13:45	3	1	0	0	0	0	4
2:00	0	0	0	0	0	0	0	14:00	2	0	0	0	0	0	2
2:15	0	0	0	0	0	0	0	14:15	0	1	0	0	0	0	1
2:30	0	0	0	0	0	0	0	14:30	1	0	0	0	0	0	1
2:45	0	0	0	0	0	0	0	14:45	1	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0	15:00	2	0	0	0	0	0	2
3:15	0	0	0	0	0	0	0	15:15	1	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	15:30	1	0	0	0	0	0	1
3:45	2	0	0	0	0	0	2	15:45	3	0	0	0	0	0	3
4:00	0	1	0	0	0	0	1	16:00	2	0	0	0	0	0	2
4:15	0	0	0	0	0	0	0	16:15	1	0	0	0	0	0	1
4:30	0	0	0	0	0	0	0	16:30	1	0	0	0	0	0	1
4:45	1	0	0	0	0	0	1	16:45	2	0	0	0	0	0	2
5:00	0	0	0	0	0	0	0	17:00	1	0	0	0	0	0	1
5:15	0	0	0	0	0	0	0	17:15	3	0	0	0	0	0	3
5:30	0	0	0	0	0	0	0	17:30	1	0	0	0	0	0	1
5:45	0	0	0	0	0	0	0	17:45	3	0	0	0	0	0	3
6:00	0	0	0	0	0	0	0	18:00	3	0	0	0	0	0	3
6:15	1	0	0	0	0	0	1	18:15	1	0	0	0	0	0	1
6:30	0	0	0	0	0	0	0	18:30	3	0	0	0	0	0	3
6:45	1	0	0	0	0	0	1	18:45	3	0	0	0	0	0	3
7:00	0	0	0	0	0	0	0	19:00	4	0	0	0	0	0	4
7:15	0	0	0	0	0	0	0	19:15	2	0	0	0	0	0	2
7:30	0	0	0	0	0	0	0	19:30	1	0	0	0	0	0	1
7:45	1	0	0	0	0	0	1	19:45	2	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	20:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	20:15	1	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	20:45	0	0	0	0	0	0	0
9:00	2	0	0	0	0	0	2	21:00	0	0	0	0	0	0	0
9:15	2	0	0	0	0	0	2	21:15	2	0	0	0	0	0	2
9:30	2	0	0	0	1	0	3	21:30	1	0	0	0	0	0	1
9:45	1	0	0	0	0	0	1	21:45	0	0	0	0	0	0	0
10:00	1	0	0	0	0	0	1	22:00	0	0	0	0	0	0	0
10:15	2	0	0	0	0	0	2	22:15	0	0	0	0	0	0	0
10:30	5	0	0	0	0	0	5	22:30	0	0	0	0	0	0	0
10:45	2	0	0	0	0	0	2	22:45	0	0	0	0	0	0	0
11:00	2	0	0	0	0	0	2	23:00	0	0	0	0	0	0	0
11:15	5	0	0	0	0	0	5	23:15	0	0	0	0	0	0	0
11:30	2	0	0	0	0	0	2	23:30	0	0	0	0	0	0	0
11:45	2	0	0	0	0	0	2	23:45	0	0	0	0	0	0	0
TOTAL	35	1	0	0	1	0	37	TOTAL	62	2	0	0	0	0	64

AM PEAK HOUR	10:30 AM	AM PEAK HOUR	6:30 PM
AM PEAK VOLUME	14	AM PEAK VOLUME	12

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	97	3	0	0	1	0	101
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.0%	3.0%	0.0%	0.0%	1.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	335	10	0	1	1	0	347
CLASS 6	Buses	% OF TOTAL	96.5%	2.9%	0.0%	0.3%	0.3%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY2 Middle dwy south of Bear Valley Rd (west of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	1	0	0	0	0	0	1
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	0	0	0	0	0	0
6:30	1	0	0	0	0	0	1
6:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0
9:15	1	0	0	0	0	0	1
9:30	2	0	0	0	0	0	2
9:45	3	0	0	0	0	0	3
10:00	2	0	0	0	0	0	2
10:15	3	0	0	0	0	0	3
10:30	4	0	0	0	0	0	4
10:45	5	1	0	0	0	0	6
11:00	1	0	0	0	0	0	1
11:15	4	0	0	0	0	0	4
11:30	7	0	0	0	0	0	7
11:45	5	0	0	0	0	0	5
TOTAL	40	1	0	0	0	0	41

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	18

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	2	0	0	0	0	0	2
12:15	5	0	0	0	0	0	5
12:30	5	0	0	1	0	0	6
12:45	6	0	0	0	0	0	6
13:00	10	0	0	0	0	0	10
13:15	4	0	0	0	0	0	4
13:30	10	0	0	0	0	0	10
13:45	4	0	0	0	0	0	4
14:00	3	1	0	0	0	0	4
14:15	5	1	0	0	0	0	6
14:30	11	0	0	0	0	0	11
14:45	3	1	0	0	0	0	4
15:00	5	0	0	0	0	0	5
15:15	5	0	0	0	0	0	5
15:30	3	0	0	0	0	0	3
15:45	5	1	0	0	0	0	6
16:00	6	0	0	0	0	0	6
16:15	3	0	0	0	0	0	3
16:30	3	0	0	0	0	0	3
16:45	3	0	0	0	0	0	3
17:00	6	0	0	0	0	0	6
17:15	8	0	0	0	0	0	8
17:30	6	1	0	0	0	0	7
17:45	4	0	0	0	0	0	4
18:00	12	0	0	0	0	0	12
18:15	5	0	0	0	0	0	5
18:30	6	0	0	0	0	0	6
18:45	7	0	0	0	0	0	7
19:00	9	0	0	0	0	0	9
19:15	2	0	0	0	0	0	2
19:30	2	0	0	0	0	0	2
19:45	0	0	0	0	0	0	0
20:00	9	0	0	0	0	0	9
20:15	4	0	0	0	0	0	4
20:30	3	0	0	0	0	0	3
20:45	6	0	0	0	0	0	6
21:00	0	1	0	0	0	0	1
21:15	1	0	0	0	0	0	1
21:30	1	0	0	0	0	0	1
21:45	1	0	0	0	0	0	1
22:00	3	0	0	0	0	0	3
22:15	0	0	0	0	0	0	0
22:30	2	0	0	0	0	0	2
22:45	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	198	6	0	1	0	0	205

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	31

TOTAL: AM+PM	238	7	0	1	0	0	246
% OF TOTAL	96.7%	2.8%	0.0%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY2 Middle dwy south of Bear Valley Rd (west of Mall Blvd)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	2	0	0	0	0	0	2
0:15	1	0	0	0	0	0	1	12:15	7	0	0	0	0	0	7
0:30	0	0	0	0	0	0	0	12:30	6	0	0	1	0	0	7
0:45	0	0	0	0	0	0	0	12:45	8	0	0	0	0	0	8
1:00	0	0	0	0	0	0	0	13:00	11	0	0	0	0	0	11
1:15	0	0	0	0	0	0	0	13:15	7	0	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	12	0	0	0	0	0	12
1:45	0	0	0	0	0	0	0	13:45	7	1	0	0	0	0	8
2:00	0	0	0	0	0	0	0	14:00	5	1	0	0	0	0	6
2:15	0	0	0	0	0	0	0	14:15	5	2	0	0	0	0	7
2:30	0	0	0	0	0	0	0	14:30	12	0	0	0	0	0	12
2:45	0	0	0	0	0	0	0	14:45	4	1	0	0	0	0	5
3:00	0	0	0	0	0	0	0	15:00	7	0	0	0	0	0	7
3:15	0	0	0	0	0	0	0	15:15	6	0	0	0	0	0	6
3:30	0	0	0	0	0	0	0	15:30	4	0	0	0	0	0	4
3:45	2	0	0	0	0	0	2	15:45	8	1	0	0	0	0	9
4:00	0	1	0	0	0	0	1	16:00	8	0	0	0	0	0	8
4:15	0	0	0	0	0	0	0	16:15	4	0	0	0	0	0	4
4:30	0	0	0	0	0	0	0	16:30	4	0	0	0	0	0	4
4:45	2	0	0	0	0	0	2	16:45	5	0	0	0	0	0	5
5:00	0	0	0	0	0	0	0	17:00	7	0	0	0	0	0	7
5:15	0	0	0	0	0	0	0	17:15	11	0	0	0	0	0	11
5:30	0	0	0	0	0	0	0	17:30	7	1	0	0	0	0	8
5:45	0	0	0	0	0	0	0	17:45	7	0	0	0	0	0	7
6:00	1	0	0	0	0	0	1	18:00	15	0	0	0	0	0	15
6:15	1	0	0	0	0	0	1	18:15	6	0	0	0	0	0	6
6:30	1	0	0	0	0	0	1	18:30	9	0	0	0	0	0	9
6:45	1	0	0	0	0	0	1	18:45	10	0	0	0	0	0	10
7:00	0	0	0	0	0	0	0	19:00	13	0	0	0	0	0	13
7:15	0	0	0	0	0	0	0	19:15	4	0	0	0	0	0	4
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	1	0	0	0	0	0	1	19:45	2	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	20:00	9	0	0	0	0	0	9
8:15	0	0	0	0	0	0	0	20:15	5	0	0	0	0	0	5
8:30	0	0	0	0	0	0	0	20:30	3	0	0	0	0	0	3
8:45	0	0	0	0	0	0	0	20:45	6	0	0	0	0	0	6
9:00	2	0	0	0	0	0	2	21:00	0	1	0	0	0	0	1
9:15	3	0	0	0	0	0	3	21:15	3	0	0	0	0	0	3
9:30	4	0	0	0	1	0	5	21:30	2	0	0	0	0	0	2
9:45	4	0	0	0	0	0	4	21:45	1	0	0	0	0	0	1
10:00	3	0	0	0	0	0	3	22:00	3	0	0	0	0	0	3
10:15	5	0	0	0	0	0	5	22:15	0	0	0	0	0	0	0
10:30	9	0	0	0	0	0	9	22:30	2	0	0	0	0	0	2
10:45	7	1	0	0	0	0	8	22:45	0	0	0	0	0	0	0
11:00	3	0	0	0	0	0	3	23:00	0	0	0	0	0	0	0
11:15	9	0	0	0	0	0	9	23:15	0	0	0	0	0	0	0
11:30	9	0	0	0	0	0	9	23:30	0	0	0	0	0	0	0
11:45	7	0	0	0	0	0	7	23:45	0	0	0	0	0	0	0
TOTAL	75	2	0	0	1	0	78	**TOTAL**	260	8	0	1	0	0	269

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	29

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	41

TOTAL: AM+PM	335	10	0	1	1	0	347
% OF TOTAL	96.5%	2.9%	0.0%	0.3%	0.3%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY3 Estern dwy south of Bear Valley Rd (west of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	99	4	0	1	0	1	105
0:15	4	0	0	0	0	0	4	12:15	99	1	1	0	0	1	102
0:30	1	0	0	0	0	0	1	12:30	106	5	1	2	0	1	115
0:45	1	0	0	1	0	0	2	12:45	93	1	0	0	0	0	94
1:00	1	0	0	0	0	0	1	13:00	92	3	0	0	0	1	96
1:15	4	0	0	1	0	0	5	13:15	81	2	0	0	0	1	84
1:30	1	0	0	0	0	0	1	13:30	101	1	0	1	0	0	103
1:45	1	0	0	0	0	0	1	13:45	83	2	0	1	0	0	86
2:00	0	0	0	0	0	0	0	14:00	76	6	0	1	0	1	84
2:15	1	0	0	0	0	0	1	14:15	79	0	2	0	0	1	82
2:30	3	0	0	1	0	0	4	14:30	80	2	2	2	0	1	87
2:45	1	0	0	2	0	0	3	14:45	79	3	0	1	0	0	83
3:00	0	0	0	0	0	0	0	15:00	74	2	0	0	0	0	76
3:15	0	0	0	0	0	0	0	15:15	96	2	0	0	0	1	99
3:30	2	0	0	0	0	0	2	15:30	79	1	0	0	0	1	81
3:45	3	0	0	0	0	0	3	15:45	99	1	0	1	0	1	102
4:00	0	0	0	0	0	0	0	16:00	89	2	0	0	0	0	91
4:15	3	0	0	0	0	0	3	16:15	77	2	0	2	0	1	82
4:30	2	0	0	0	0	0	2	16:30	76	3	0	0	0	0	79
4:45	16	0	0	0	0	0	16	16:45	102	3	0	0	0	1	106
5:00	7	1	0	0	0	0	8	17:00	99	2	0	0	0	1	102
5:15	6	0	0	0	0	0	6	17:15	96	0	0	0	0	0	96
5:30	6	1	0	0	0	0	7	17:30	81	4	0	0	0	0	85
5:45	10	2	0	0	0	0	12	17:45	110	1	0	1	1	1	114
6:00	14	1	1	0	0	1	17	18:00	100	0	0	0	0	0	100
6:15	13	1	0	0	0	0	14	18:15	83	0	0	0	0	1	84
6:30	14	2	1	0	0	0	17	18:30	67	0	0	0	0	0	67
6:45	18	0	0	1	0	0	19	18:45	103	0	1	0	0	0	104
7:00	14	1	1	2	0	1	19	19:00	77	2	0	0	0	0	79
7:15	24	2	0	0	0	0	26	19:15	73	0	0	0	0	1	74
7:30	30	1	0	0	0	0	31	19:30	68	0	0	0	0	0	68
7:45	33	3	0	0	0	0	36	19:45	59	1	0	1	0	0	61
8:00	31	2	0	1	0	1	35	20:00	50	0	0	0	0	0	50
8:15	40	2	1	1	0	0	44	20:15	49	0	0	0	0	1	50
8:30	51	3	0	0	0	0	54	20:30	41	0	0	0	0	0	41
8:45	58	0	0	3	0	0	61	20:45	34	0	0	0	0	0	34
9:00	86	6	3	1	0	1	97	21:00	28	0	0	0	0	1	29
9:15	63	4	0	1	0	0	68	21:15	21	0	0	1	0	0	22
9:30	67	1	0	0	0	1	69	21:30	20	0	0	0	0	0	20
9:45	73	2	0	0	0	0	75	21:45	20	1	0	0	0	0	21
10:00	76	3	1	0	0	1	81	22:00	11	0	0	0	0	0	11
10:15	89	3	1	0	0	0	93	22:15	9	1	0	0	0	0	10
10:30	79	0	0	0	0	0	79	22:30	8	0	0	0	0	0	8
10:45	106	3	1	0	0	1	111	22:45	6	0	0	0	0	0	6
11:00	104	2	0	0	0	2	108	23:00	4	0	0	0	0	0	4
11:15	78	1	0	1	0	1	81	23:15	1	0	0	0	0	0	1
11:30	88	2	1	0	0	0	91	23:30	1	0	0	0	0	0	1
11:45	90	1	0	0	0	0	91	23:45	2	0	0	0	0	0	2
TOTAL	1,412	50	11	16	0	10	1,499	**TOTAL**	3,081	58	7	15	1	19	3,181

AM PEAK HOUR	10:45 AM	**AM PEAK HOUR**	12:00 PM
AM PEAK VOLUME	391	**AM PEAK VOLUME**	416

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	4,493	108	18	31	1	29	4,680
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	96.0%	2.3%	0.4%	0.7%	0.0%	0.6%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	8,661	200	32	52	3	59	9,007
CLASS 6	Buses	**% OF TOTAL**	96.2%	2.2%	0.4%	0.6%	0.0%	0.7%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY3 Estern dwy south of Bear Valley Rd (west of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	7	0	0	0	0	0	7
0:15	5	0	0	0	0	0	5
0:30	6	0	0	0	0	0	6
0:45	5	0	0	0	0	0	5
1:00	0	0	0	0	0	0	0
1:15	2	0	0	0	0	0	2
1:30	1	0	0	0	0	0	1
1:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1
2:15	1	0	0	0	0	0	1
2:30	2	0	0	0	0	0	2
2:45	1	2	0	0	0	0	3
3:00	1	0	0	0	0	0	1
3:15	1	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0
3:45	1	0	0	0	0	0	1
4:00	0	0	0	0	0	0	0
4:15	1	1	0	0	0	0	2
4:30	2	0	0	0	0	0	2
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	2	0	0	0	0	0	2
5:30	4	0	0	0	0	0	4
5:45	1	0	0	0	0	0	1
6:00	5	1	0	0	0	0	6
6:15	7	0	0	0	0	0	7
6:30	11	0	0	0	0	0	11
6:45	15	2	0	0	0	1	18
7:00	17	0	0	0	0	0	17
7:15	8	1	3	1	0	0	13
7:30	18	3	0	0	0	0	21
7:45	22	2	0	1	1	1	27
8:00	26	0	0	0	0	0	26
8:15	18	0	0	0	0	0	18
8:30	19	3	0	0	0	0	22
8:45	27	0	0	2	0	1	30
9:00	48	1	0	1	0	0	50
9:15	33	2	1	0	0	1	37
9:30	50	0	1	1	0	0	52
9:45	58	5	1	1	0	0	65
10:00	67	1	0	0	0	1	69
10:15	57	1	0	1	0	0	59
10:30	71	1	0	0	0	1	73
10:45	66	4	1	0	0	1	72
11:00	69	1	1	0	0	1	72
11:15	67	0	0	0	0	0	67
11:30	90	2	0	0	0	0	92
11:45	73	1	0	0	0	1	75
TOTAL	986	34	8	8	1	9	1,046

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	306

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	80	2	0	0	0	2	84
12:15	88	4	0	1	0	1	94
12:30	101	2	1	0	0	0	104
12:45	90	2	0	1	0	0	93
13:00	89	4	0	0	0	1	94
13:15	87	1	0	1	0	2	91
13:30	87	3	2	1	0	0	93
13:45	74	2	0	0	0	0	76
14:00	78	3	0	1	1	2	85
14:15	84	4	0	2	0	1	91
14:30	78	2	0	0	0	0	80
14:45	72	1	1	0	0	0	74
15:00	77	4	1	1	0	1	84
15:15	81	2	0	0	0	1	84
15:30	76	0	0	0	0	1	77
15:45	82	2	0	0	0	0	84
16:00	79	1	0	0	0	1	81
16:15	86	2	0	1	0	0	89
16:30	60	2	0	1	0	1	64
16:45	85	0	0	0	0	1	86
17:00	90	3	0	1	0	1	95
17:15	102	2	0	0	0	0	104
17:30	67	2	0	0	0	0	69
17:45	93	2	0	0	0	1	96
18:00	85	1	0	0	0	1	87
18:15	88	1	1	0	0	0	90
18:30	83	0	0	0	0	0	83
18:45	92	0	0	0	0	1	93
19:00	94	0	0	0	0	0	94
19:15	63	0	0	0	0	0	63
19:30	78	1	0	1	0	0	80
19:45	60	1	0	0	0	0	61
20:00	76	0	0	0	0	1	77
20:15	56	0	0	0	0	0	56
20:30	54	0	0	0	0	0	54
20:45	64	0	0	0	0	0	64
21:00	46	1	0	1	0	1	49
21:15	53	0	0	0	0	0	53
21:30	46	0	0	0	0	0	46
21:45	30	0	0	0	0	0	30
22:00	27	1	0	0	0	0	28
22:15	19	0	0	0	0	0	19
22:30	24	0	0	0	0	0	24
22:45	18	0	0	0	0	0	18
23:00	14	0	0	0	0	0	14
23:15	10	0	0	0	0	0	10
23:30	6	0	0	0	0	0	6
23:45	10	0	0	0	0	0	10
TOTAL	3,182	58	6	13	1	21	3,281

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	385

TOTAL: AM+PM	4,168	92	14	21	2	30	4,327
% OF TOTAL	96.3%	2.1%	0.3%	0.5%	0.0%	0.7%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY3 Estern dwy south of Bear Valley Rd (west of Mall Blvd)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	7	0	0	0	0	0	7	12:00	179	6	0	1	0	3	189
0:15	9	0	0	0	0	0	9	12:15	187	5	1	1	0	2	196
0:30	7	0	0	0	0	0	7	12:30	207	7	2	2	0	1	219
0:45	6	0	0	1	0	0	7	12:45	183	3	0	1	0	0	187
1:00	1	0	0	0	0	0	1	13:00	181	7	0	0	0	2	190
1:15	6	0	0	1	0	0	7	13:15	168	3	0	1	0	3	175
1:30	2	0	0	0	0	0	2	13:30	188	4	2	2	0	0	196
1:45	1	0	0	0	0	0	1	13:45	157	4	0	1	0	0	162
2:00	1	0	0	0	0	0	1	14:00	154	9	0	2	1	3	169
2:15	2	0	0	0	0	0	2	14:15	163	4	2	2	0	2	173
2:30	5	0	0	1	0	0	6	14:30	158	4	2	2	0	1	167
2:45	2	2	0	2	0	0	6	14:45	151	4	1	1	0	0	157
3:00	1	0	0	0	0	0	1	15:00	151	6	1	1	0	1	160
3:15	1	0	0	0	0	0	1	15:15	177	4	0	0	0	2	183
3:30	2	0	0	0	0	0	2	15:30	155	1	0	0	0	2	158
3:45	4	0	0	0	0	0	4	15:45	181	3	0	1	0	1	186
4:00	0	0	0	0	0	0	0	16:00	168	3	0	0	0	1	172
4:15	4	1	0	0	0	0	5	16:15	163	4	0	3	0	1	171
4:30	4	0	0	0	0	0	4	16:30	136	5	0	1	0	1	143
4:45	16	0	0	0	0	0	16	16:45	187	3	0	0	0	2	192
5:00	7	1	0	0	0	0	8	17:00	189	5	0	1	0	2	197
5:15	8	0	0	0	0	0	8	17:15	198	2	0	0	0	0	200
5:30	10	1	0	0	0	0	11	17:30	148	6	0	0	0	0	154
5:45	11	2	0	0	0	0	13	17:45	203	3	0	1	1	2	210
6:00	19	2	1	0	0	1	23	18:00	185	1	0	0	0	1	187
6:15	20	1	0	0	0	0	21	18:15	171	1	1	0	0	1	174
6:30	25	2	1	0	0	0	28	18:30	150	0	0	0	0	0	150
6:45	33	2	0	1	0	1	37	18:45	195	0	1	0	0	1	197
7:00	31	1	1	2	0	1	36	19:00	171	2	0	0	0	0	173
7:15	32	3	3	1	0	0	39	19:15	136	0	0	0	0	1	137
7:30	48	4	0	0	0	0	52	19:30	146	1	0	1	0	0	148
7:45	55	5	0	1	1	1	63	19:45	119	2	0	1	0	0	122
8:00	57	2	0	1	0	1	61	20:00	126	0	0	0	0	1	127
8:15	58	2	1	1	0	0	62	20:15	105	0	0	0	0	1	106
8:30	70	6	0	0	0	0	76	20:30	95	0	0	0	0	0	95
8:45	85	0	0	5	0	1	91	20:45	98	0	0	0	0	0	98
9:00	134	7	3	2	0	1	147	21:00	74	1	0	1	0	2	78
9:15	96	6	1	1	0	1	105	21:15	74	0	0	1	0	0	75
9:30	117	1	1	1	0	1	121	21:30	66	0	0	0	0	0	66
9:45	131	7	1	1	0	0	140	21:45	50	1	0	0	0	0	51
10:00	143	4	1	0	0	2	150	22:00	38	1	0	0	0	0	39
10:15	146	4	1	1	0	0	152	22:15	28	1	0	0	0	0	29
10:30	150	1	0	0	0	1	152	22:30	32	0	0	0	0	0	32
10:45	172	7	2	0	0	2	183	22:45	24	0	0	0	0	0	24
11:00	173	3	1	0	0	3	180	23:00	18	0	0	0	0	0	18
11:15	145	1	0	1	0	1	148	23:15	11	0	0	0	0	0	11
11:30	178	4	1	0	0	0	183	23:30	7	0	0	0	0	0	7
11:45	163	2	0	0	0	1	166	23:45	12	0	0	0	0	0	12
TOTAL	2,398	84	19	24	1	19	2,545	TOTAL	6,263	116	13	28	2	40	6,462

AM PEAK HOUR	10:45 AM	AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	694	AM PEAK VOLUME	792

TOTAL: AM+PM	8,661	200	32	52	3	59	9,007
% OF TOTAL	96.2%	2.2%	0.4%	0.6%	0.0%	0.7%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY4 Western dwy south of Bear Valley Rd (east of Mall Blvd

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	16	0	0	0	0	0	16
0:15	0	0	0	0	0	0	0	12:15	9	3	0	0	0	0	12
0:30	0	0	0	0	0	0	0	12:30	13	0	0	0	0	0	13
0:45	0	0	0	0	0	0	0	12:45	11	0	0	0	0	0	11
1:00	0	0	0	0	0	0	0	13:00	14	0	0	0	0	0	14
1:15	0	0	0	0	0	0	0	13:15	6	0	0	0	0	0	6
1:30	0	0	0	0	0	0	0	13:30	11	0	0	0	0	0	11
1:45	0	0	0	0	0	0	0	13:45	10	0	0	0	0	0	10
2:00	0	0	0	0	0	0	0	14:00	5	0	0	0	0	0	5
2:15	0	0	0	0	0	0	0	14:15	7	1	0	0	0	0	8
2:30	0	0	0	0	0	0	0	14:30	15	1	0	0	0	0	16
2:45	0	0	0	0	0	0	0	14:45	16	0	0	0	0	0	16
3:00	0	0	0	0	0	0	0	15:00	5	0	0	0	0	0	5
3:15	0	0	0	0	0	0	0	15:15	10	0	0	0	0	0	10
3:30	0	0	0	0	0	0	0	15:30	12	0	0	0	0	0	12
3:45	0	0	0	0	0	0	0	15:45	14	1	0	0	0	0	15
4:00	0	0	0	0	0	0	0	16:00	10	0	0	1	0	0	11
4:15	0	0	0	0	0	0	0	16:15	7	0	0	0	0	0	7
4:30	1	0	0	0	0	0	1	16:30	15	0	0	0	0	0	15
4:45	0	0	0	0	0	0	0	16:45	25	0	0	0	0	0	25
5:00	1	0	0	0	0	0	1	17:00	15	0	0	0	0	0	15
5:15	0	0	0	0	0	0	0	17:15	13	0	0	0	0	0	13
5:30	0	0	0	0	0	0	0	17:30	17	0	0	0	0	0	17
5:45	2	0	0	0	0	0	2	17:45	10	0	0	0	0	0	10
6:00	1	0	0	0	0	0	1	18:00	6	0	0	0	0	0	6
6:15	2	0	0	0	0	0	2	18:15	7	0	0	0	0	0	7
6:30	2	0	0	0	0	0	2	18:30	5	0	0	0	0	0	5
6:45	1	0	0	0	0	0	1	18:45	7	0	0	0	0	0	7
7:00	1	0	0	0	0	0	1	19:00	6	0	0	0	0	0	6
7:15	1	0	0	0	0	0	1	19:15	1	0	0	0	0	0	1
7:30	1	0	0	0	0	0	1	19:30	9	0	0	0	0	0	9
7:45	4	0	0	0	0	0	4	19:45	7	0	0	0	0	0	7
8:00	4	0	0	0	0	0	4	20:00	6	0	0	0	0	0	6
8:15	4	0	0	0	0	0	4	20:15	4	0	0	0	0	0	4
8:30	5	1	0	0	0	0	6	20:30	3	0	0	0	0	0	3
8:45	4	0	0	0	0	0	4	20:45	5	0	0	0	0	0	5
9:00	5	0	1	0	0	0	6	21:00	1	0	0	0	0	0	1
9:15	5	0	0	0	0	0	5	21:15	0	0	0	0	0	0	0
9:30	9	0	0	0	0	0	9	21:30	2	0	0	0	0	0	2
9:45	4	0	0	0	0	0	4	21:45	0	0	0	0	0	0	0
10:00	8	0	0	0	0	0	8	22:00	1	0	0	0	0	0	1
10:15	7	1	0	0	0	0	8	22:15	0	0	0	0	0	0	0
10:30	7	0	0	0	0	0	7	22:30	0	0	0	1	0	0	1
10:45	8	0	0	0	0	0	8	22:45	0	0	0	0	0	0	0
11:00	15	0	0	0	0	0	15	23:00	0	0	0	0	0	0	0
11:15	9	0	0	0	0	0	9	23:15	1	0	0	0	0	0	1
11:30	8	1	0	0	0	0	9	23:30	0	0	0	0	0	0	0
11:45	11	0	0	0	0	0	11	23:45	0	0	0	0	0	0	0
TOTAL	130	3	1	0	0	0	134	TOTAL	357	6	0	2	0	0	365

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	44	AM PEAK VOLUME	70

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	487	9	1	2	0	0	499
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	97.6%	1.8%	0.2%	0.4%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	935	30	3	10	0	0	978
CLASS 6	Buses	% OF TOTAL	95.6%	3.1%	0.3%	1.0%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY4 Western dwy south of Bear Valley Rd (east of Mall Blvd

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	1	0	0	1
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	3	0	0	3
3:30	0	0	0	1	0	0	1
3:45	0	2	0	0	0	0	2
4:00	1	0	0	0	0	0	1
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	1	0	0	0	0	0	1
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	1	0	0	0	0	1
6:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	1	0	0	0	0	0	1
7:00	1	1	0	1	0	0	3
7:15	2	0	0	0	0	0	2
7:30	0	0	0	0	0	0	0
7:45	3	0	0	0	0	0	3
8:00	3	1	0	0	0	0	4
8:15	4	1	0	0	0	0	5
8:30	3	0	0	0	0	0	3
8:45	2	1	0	0	0	0	3
9:00	5	0	0	0	0	0	5
9:15	7	0	0	1	0	0	8
9:30	5	1	0	0	0	0	6
9:45	5	1	0	0	0	0	6
10:00	5	0	0	0	0	0	5
10:15	7	0	0	0	0	0	7
10:30	10	0	0	0	0	0	10
10:45	8	0	0	0	0	0	8
11:00	14	0	1	0	0	0	15
11:15	13	0	1	0	0	0	14
11:30	12	0	0	0	0	0	12
11:45	8	1	0	0	0	0	9
TOTAL	120	10	2	7	0	0	139

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	50

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	7	0	0	0	0	0	7
12:15	13	0	0	0	0	0	13
12:30	12	1	0	0	0	0	13
12:45	8	1	0	0	0	0	9
13:00	19	1	0	0	0	0	20
13:15	13	0	0	0	0	0	13
13:30	9	1	0	0	0	0	10
13:45	13	0	0	0	0	0	13
14:00	14	0	0	0	0	0	14
14:15	7	0	0	0	0	0	7
14:30	9	0	0	0	0	0	9
14:45	8	2	0	0	0	0	10
15:00	6	0	0	0	0	0	6
15:15	7	0	0	0	0	0	7
15:30	16	1	0	0	0	0	17
15:45	12	0	0	0	0	0	12
16:00	9	0	0	0	0	0	9
16:15	4	0	0	0	0	0	4
16:30	6	0	0	0	0	0	6
16:45	10	0	0	0	0	0	10
17:00	9	1	0	0	0	0	10
17:15	9	1	0	0	0	0	10
17:30	13	0	0	0	0	0	13
17:45	8	1	0	0	0	0	9
18:00	11	0	0	0	0	0	11
18:15	6	0	0	0	0	0	6
18:30	1	0	0	0	0	0	1
18:45	10	0	0	0	0	0	10
19:00	7	0	0	0	0	0	7
19:15	11	0	0	0	0	0	11
19:30	9	0	0	0	0	0	9
19:45	4	0	0	0	0	0	4
20:00	6	0	0	0	0	0	6
20:15	7	0	0	0	0	0	7
20:30	3	1	0	0	0	0	4
20:45	1	0	0	0	0	0	1
21:00	2	0	0	0	0	0	2
21:15	2	0	0	0	0	0	2
21:30	1	0	0	1	0	0	2
21:45	0	0	0	0	0	0	0
22:00	1	0	0	0	0	0	1
22:15	0	0	0	0	0	0	0
22:30	1	0	0	0	0	0	1
22:45	0	0	0	0	0	0	0
23:00	3	0	0	0	0	0	3
23:15	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0
23:45	1	0	0	0	0	0	1
TOTAL	328	11	0	1	0	0	340

AM PEAK HOUR	1:00 PM
AM PEAK VOLUME	56

TOTAL: AM+PM		448	21	2	8	0	0	479
% OF TOTAL		93.5%	4.4%	0.4%	1.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY4 Western dwy south of Bear Valley Rd (east of Mall Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	23	0	0	0	0	0	23
0:15	0	0	0	0	0	0	0	12:15	22	3	0	0	0	0	25
0:30	0	0	0	0	0	0	0	12:30	25	1	0	0	0	0	26
0:45	0	0	0	0	0	0	0	12:45	19	1	0	0	0	0	20
1:00	0	0	0	0	0	0	0	13:00	33	1	0	0	0	0	34
1:15	0	0	0	0	0	0	0	13:15	19	0	0	0	0	0	19
1:30	0	0	0	0	0	0	0	13:30	20	1	0	0	0	0	21
1:45	0	0	0	0	0	0	0	13:45	23	0	0	0	0	0	23
2:00	0	0	0	0	0	0	0	14:00	19	0	0	0	0	0	19
2:15	0	0	0	0	0	0	0	14:15	14	1	0	0	0	0	15
2:30	0	0	0	1	0	0	1	14:30	24	1	0	0	0	0	25
2:45	0	0	0	0	0	0	0	14:45	24	2	0	0	0	0	26
3:00	0	0	0	0	0	0	0	15:00	11	0	0	0	0	0	11
3:15	0	0	0	3	0	0	3	15:15	17	0	0	0	0	0	17
3:30	0	0	0	1	0	0	1	15:30	28	1	0	0	0	0	29
3:45	0	2	0	0	0	0	2	15:45	26	1	0	0	0	0	27
4:00	1	0	0	0	0	0	1	16:00	19	0	0	1	0	0	20
4:15	0	0	0	0	0	0	0	16:15	11	0	0	0	0	0	11
4:30	1	0	0	0	0	0	1	16:30	21	0	0	0	0	0	21
4:45	0	0	0	0	0	0	0	16:45	35	0	0	0	0	0	35
5:00	2	0	0	0	0	0	2	17:00	24	1	0	0	0	0	25
5:15	0	0	0	0	0	0	0	17:15	22	1	0	0	0	0	23
5:30	0	0	0	0	0	0	0	17:30	30	0	0	0	0	0	30
5:45	2	1	0	0	0	0	3	17:45	18	1	0	0	0	0	19
6:00	1	0	0	0	0	0	1	18:00	17	0	0	0	0	0	17
6:15	2	0	0	0	0	0	2	18:15	13	0	0	0	0	0	13
6:30	2	0	0	0	0	0	2	18:30	6	0	0	0	0	0	6
6:45	2	0	0	0	0	0	2	18:45	17	0	0	0	0	0	17
7:00	2	1	0	1	0	0	4	19:00	13	0	0	0	0	0	13
7:15	3	0	0	0	0	0	3	19:15	12	0	0	0	0	0	12
7:30	1	0	0	0	0	0	1	19:30	18	0	0	0	0	0	18
7:45	7	0	0	0	0	0	7	19:45	11	0	0	0	0	0	11
8:00	7	1	0	0	0	0	8	20:00	12	0	0	0	0	0	12
8:15	8	1	0	0	0	0	9	20:15	11	0	0	0	0	0	11
8:30	8	1	0	0	0	0	9	20:30	6	1	0	0	0	0	7
8:45	6	1	0	0	0	0	7	20:45	6	0	0	0	0	0	6
9:00	10	0	1	0	0	0	11	21:00	3	0	0	0	0	0	3
9:15	12	0	0	1	0	0	13	21:15	2	0	0	0	0	0	2
9:30	14	1	0	0	0	0	15	21:30	3	0	0	1	0	0	4
9:45	9	1	0	0	0	0	10	21:45	0	0	0	0	0	0	0
10:00	13	0	0	0	0	0	13	22:00	2	0	0	0	0	0	2
10:15	14	1	0	0	0	0	15	22:15	0	0	0	0	0	0	0
10:30	17	0	0	0	0	0	17	22:30	1	0	0	1	0	0	2
10:45	16	0	0	0	0	0	16	22:45	0	0	0	0	0	0	0
11:00	29	0	1	0	0	0	30	23:00	3	0	0	0	0	0	3
11:15	22	0	1	0	0	0	23	23:15	1	0	0	0	0	0	1
11:30	20	1	0	0	0	0	21	23:30	0	0	0	0	0	0	0
11:45	19	1	0	0	0	0	20	23:45	1	0	0	0	0	0	1
TOTAL	250	13	3	7	0	0	273	TOTAL	685	17	0	3	0	0	705

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	94

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	113

TOTAL: AM+PM	935	30	3	10	0	0	978
% OF TOTAL	95.6%	3.1%	0.3%	1.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY5 Middle dwy south of Bear Valley Rd (east of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	10	0	0	0	0	0	10
0:15	0	0	0	0	0	0	0	12:15	7	1	0	0	0	0	8
0:30	0	0	0	0	0	0	0	12:30	8	0	0	0	0	0	8
0:45	0	0	0	0	0	0	0	12:45	7	0	0	0	0	0	7
1:00	0	0	0	0	0	0	0	13:00	2	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0	13:15	7	1	0	0	0	0	8
1:30	0	0	0	0	0	0	0	13:30	5	1	0	0	0	0	6
1:45	0	0	0	0	0	0	0	13:45	5	0	0	0	0	0	5
2:00	0	0	0	0	0	0	0	14:00	7	0	0	0	0	0	7
2:15	0	0	0	0	0	0	0	14:15	7	1	0	0	1	0	9
2:30	0	0	0	0	0	0	0	14:30	12	0	0	0	0	0	12
2:45	1	0	0	0	0	0	1	14:45	9	0	0	0	0	0	9
3:00	0	0	0	0	0	0	0	15:00	8	1	0	0	0	0	9
3:15	0	0	0	0	0	0	0	15:15	10	0	0	0	0	0	10
3:30	0	0	0	0	0	0	0	15:30	11	0	0	0	0	0	11
3:45	0	0	0	0	0	0	0	15:45	8	0	0	0	0	0	8
4:00	0	0	0	0	0	0	0	16:00	8	0	0	0	0	0	8
4:15	1	0	0	0	0	0	1	16:15	5	0	0	0	0	0	5
4:30	1	0	0	0	0	0	1	16:30	9	0	0	0	0	0	9
4:45	0	0	0	0	0	0	0	16:45	21	0	0	0	0	0	21
5:00	0	0	0	0	0	0	0	17:00	12	0	0	0	0	0	12
5:15	0	0	0	0	0	0	0	17:15	9	0	0	0	0	0	9
5:30	1	0	0	0	0	0	1	17:30	2	0	0	0	0	0	2
5:45	1	0	0	0	0	0	1	17:45	7	0	0	0	0	0	7
6:00	0	0	0	0	0	0	0	18:00	6	0	0	0	0	0	6
6:15	0	0	0	0	0	0	0	18:15	6	1	0	0	0	0	7
6:30	1	0	0	0	0	0	1	18:30	4	0	0	0	0	0	4
6:45	0	0	0	0	0	0	0	18:45	5	0	0	0	0	0	5
7:00	0	0	0	0	0	0	0	19:00	10	0	0	0	0	0	10
7:15	2	0	0	0	0	0	2	19:15	8	0	0	0	0	0	8
7:30	0	0	0	0	0	0	0	19:30	5	0	0	0	0	0	5
7:45	1	0	0	0	0	0	1	19:45	8	0	0	0	0	0	8
8:00	0	0	0	0	0	0	0	20:00	6	0	0	0	0	0	6
8:15	1	0	0	0	0	0	1	20:15	2	0	0	0	0	0	2
8:30	3	0	0	0	0	0	3	20:30	5	0	0	0	0	0	5
8:45	0	0	0	0	0	0	0	20:45	3	0	0	0	0	0	3
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	1	0	0	0	0	0	1	21:15	6	0	0	0	0	0	6
9:30	4	0	0	0	0	0	4	21:30	5	0	0	0	0	0	5
9:45	6	0	0	0	0	0	6	21:45	1	0	0	0	0	0	1
10:00	5	0	0	0	0	0	5	22:00	4	0	0	0	0	0	4
10:15	6	0	0	0	0	0	6	22:15	1	0	0	0	0	0	1
10:30	6	0	0	0	0	0	6	22:30	1	0	0	0	0	0	1
10:45	7	0	0	0	0	0	7	22:45	1	0	0	0	0	0	1
11:00	10	0	0	0	0	0	10	23:00	0	0	0	0	0	0	0
11:15	5	0	0	0	0	0	5	23:15	0	0	0	0	0	0	0
11:30	10	0	0	0	0	0	10	23:30	0	0	0	0	0	0	0
11:45	10	0	0	0	0	0	10	23:45	0	0	0	0	0	0	0
TOTAL	86	0	0	0	0	0	86	TOTAL	286	6	0	0	1	0	293

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	35

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	51

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	372	6	0	0	1	0	379
% OF TOTAL	98.2%	1.6%	0.0%	0.0%	0.3%	0.0%	100.0%
TOTAL: ALL	1,186	30	3	12	1	1	1,233
% OF TOTAL	96.2%	2.4%	0.2%	1.0%	0.1%	0.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY5 Middle dwy south of Bear Valley Rd (east of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	1	0	0	0	0	0	1
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	1	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	1	0	0	0	0	0	1
3:00	1	0	0	0	0	0	1
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	2	0	0	0	0	0	2
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	1	0	0	0	0	0	1
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	1	0	0	0	0	1
6:30	0	2	0	0	0	0	2
6:45	3	0	0	0	0	0	3
7:00	2	0	0	0	0	0	2
7:15	1	0	0	0	0	0	1
7:30	2	0	0	0	0	0	2
7:45	1	0	0	0	0	0	1
8:00	3	1	0	0	0	0	4
8:15	5	0	0	0	0	0	5
8:30	3	1	0	0	0	0	4
8:45	5	0	0	0	0	0	5
9:00	4	1	0	0	0	0	5
9:15	6	1	0	2	0	0	9
9:30	8	0	0	0	0	0	8
9:45	11	1	0	0	0	0	12
10:00	14	0	0	0	0	0	14
10:15	3	2	0	0	0	0	5
10:30	12	1	0	0	0	0	13
10:45	15	0	1	1	0	0	17
11:00	20	2	0	0	0	0	22
11:15	10	0	0	0	0	0	10
11:30	16	0	0	1	0	1	18
11:45	13	0	0	3	0	0	16
TOTAL	167	13	1	7	0	1	189

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	67

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	17	0	0	0	0	0	17
12:15	19	0	0	0	0	0	19
12:30	21	1	0	0	0	0	22
12:45	22	0	0	0	0	0	22
13:00	14	1	0	0	0	0	15
13:15	18	0	0	0	0	0	18
13:30	15	1	0	0	0	0	16
13:45	13	1	0	0	0	0	14
14:00	11	1	0	0	0	0	12
14:15	15	1	0	0	0	0	16
14:30	17	0	0	0	0	0	17
14:45	16	1	0	0	0	0	17
15:00	22	1	0	1	0	0	24
15:15	21	0	0	0	0	0	21
15:30	17	0	0	1	0	0	18
15:45	18	1	0	0	0	0	19
16:00	17	0	1	0	0	0	18
16:15	17	0	0	0	0	0	17
16:30	15	0	0	0	0	0	15
16:45	21	1	1	0	0	0	23
17:00	16	0	0	0	0	0	16
17:15	18	0	0	0	0	0	18
17:30	20	0	0	0	0	0	20
17:45	12	0	0	0	0	0	12
18:00	15	1	0	0	0	0	16
18:15	19	0	0	0	0	0	19
18:30	22	0	0	0	0	0	22
18:45	11	0	0	0	0	0	11
19:00	19	0	0	0	0	0	19
19:15	17	0	0	0	0	0	17
19:30	10	0	0	0	0	0	10
19:45	15	0	0	0	0	0	15
20:00	12	0	0	0	0	0	12
20:15	12	0	0	0	0	0	12
20:30	13	0	0	0	0	0	13
20:45	10	0	0	0	0	0	10
21:00	7	0	0	0	0	0	7
21:15	5	0	0	0	0	0	5
21:30	6	0	0	0	0	0	6
21:45	4	0	0	0	0	0	4
22:00	13	0	0	0	0	0	13
22:15	5	0	0	1	0	0	6
22:30	5	0	0	1	0	0	6
22:45	1	0	0	0	0	0	1
23:00	4	0	0	0	0	0	4
23:15	7	0	0	0	0	0	7
23:30	2	0	0	1	0	0	3
23:45	1	0	0	0	0	0	1
TOTAL	647	11	2	5	0	0	665

AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	82

TOTAL: AM+PM	814	24	3	12	0	1	854
% OF TOTAL	95.3%	2.8%	0.4%	1.4%	0.0%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY5 Middle dwy south of Bear Valley Rd (east of Mall Blvd)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	27	0	0	0	0	0	27
0:15	1	0	0	0	0	0	1	12:15	26	1	0	0	0	0	27
0:30	1	0	0	0	0	0	1	12:30	29	1	0	0	0	0	30
0:45	0	0	0	0	0	0	0	12:45	29	0	0	0	0	0	29
1:00	1	0	0	0	0	0	1	13:00	16	1	0	0	0	0	17
1:15	0	0	0	0	0	0	0	13:15	25	1	0	0	0	0	26
1:30	0	0	0	0	0	0	0	13:30	20	2	0	0	0	0	22
1:45	1	0	0	0	0	0	1	13:45	18	1	0	0	0	0	19
2:00	0	0	0	0	0	0	0	14:00	18	1	0	0	0	0	19
2:15	0	0	0	0	0	0	0	14:15	22	2	0	0	1	0	25
2:30	0	0	0	0	0	0	0	14:30	29	0	0	0	0	0	29
2:45	2	0	0	0	0	0	2	14:45	25	1	0	0	0	0	26
3:00	1	0	0	0	0	0	1	15:00	30	2	0	1	0	0	33
3:15	0	0	0	0	0	0	0	15:15	31	0	0	0	0	0	31
3:30	0	0	0	0	0	0	0	15:30	28	0	0	1	0	0	29
3:45	0	0	0	0	0	0	0	15:45	26	1	0	0	0	0	27
4:00	0	0	0	0	0	0	0	16:00	25	0	1	0	0	0	26
4:15	3	0	0	0	0	0	3	16:15	22	0	0	0	0	0	22
4:30	1	0	0	0	0	0	1	16:30	24	0	0	0	0	0	24
4:45	0	0	0	0	0	0	0	16:45	42	1	1	0	0	0	44
5:00	0	0	0	0	0	0	0	17:00	28	0	0	0	0	0	28
5:15	1	0	0	0	0	0	1	17:15	27	0	0	0	0	0	27
5:30	1	0	0	0	0	0	1	17:30	22	0	0	0	0	0	22
5:45	1	0	0	0	0	0	1	17:45	19	0	0	0	0	0	19
6:00	1	0	0	0	0	0	1	18:00	21	1	0	0	0	0	22
6:15	0	1	0	0	0	0	1	18:15	25	1	0	0	0	0	26
6:30	1	2	0	0	0	0	3	18:30	26	0	0	0	0	0	26
6:45	3	0	0	0	0	0	3	18:45	16	0	0	0	0	0	16
7:00	2	0	0	0	0	0	2	19:00	29	0	0	0	0	0	29
7:15	3	0	0	0	0	0	3	19:15	25	0	0	0	0	0	25
7:30	2	0	0	0	0	0	2	19:30	15	0	0	0	0	0	15
7:45	2	0	0	0	0	0	2	19:45	23	0	0	0	0	0	23
8:00	3	1	0	0	0	0	4	20:00	18	0	0	0	0	0	18
8:15	6	0	0	0	0	0	6	20:15	14	0	0	0	0	0	14
8:30	6	1	0	0	0	0	7	20:30	18	0	0	0	0	0	18
8:45	5	0	0	0	0	0	5	20:45	13	0	0	0	0	0	13
9:00	7	1	0	0	0	0	8	21:00	10	0	0	0	0	0	10
9:15	7	1	0	2	0	0	10	21:15	11	0	0	0	0	0	11
9:30	12	0	0	0	0	0	12	21:30	11	0	0	0	0	0	11
9:45	17	1	0	0	0	0	18	21:45	5	0	0	0	0	0	5
10:00	19	0	0	0	0	0	19	22:00	17	0	0	0	0	0	17
10:15	9	2	0	0	0	0	11	22:15	6	0	0	1	0	0	7
10:30	18	1	0	0	0	0	19	22:30	6	0	0	1	0	0	7
10:45	22	0	1	1	0	0	24	22:45	2	0	0	0	0	0	2
11:00	30	2	0	0	0	0	32	23:00	4	0	0	0	0	0	4
11:15	15	0	0	0	0	0	15	23:15	7	0	0	0	0	0	7
11:30	26	0	0	1	0	1	28	23:30	2	0	0	1	0	0	3
11:45	23	0	0	3	0	0	26	23:45	1	0	0	0	0	0	1
TOTAL	253	13	1	7	0	1	275	TOTAL	933	17	2	5	1	0	958

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	101

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	123

TOTAL: AM+PM	1,186	30	3	12	1	1	1,233
% OF TOTAL	96.2%	2.4%	0.2%	1.0%	0.1%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY6 Estern dwy south of Bear Valley Rd (east of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	7	0	1	0	0	0	8
0:15	2	0	0	0	0	0	2	12:15	4	0	0	0	0	0	4
0:30	1	0	0	0	0	0	1	12:30	3	0	0	0	0	0	3
0:45	0	0	0	0	0	0	0	12:45	7	0	0	0	0	0	7
1:00	2	0	0	0	0	0	2	13:00	9	0	0	0	0	0	9
1:15	4	0	0	0	0	0	4	13:15	11	1	0	0	0	0	12
1:30	1	0	0	0	0	0	1	13:30	5	0	0	0	0	0	5
1:45	1	0	0	0	0	0	1	13:45	6	1	1	0	0	0	8
2:00	2	0	0	0	0	0	2	14:00	5	1	0	0	0	0	6
2:15	1	0	0	0	0	0	1	14:15	3	1	0	0	0	0	4
2:30	5	0	0	0	0	0	5	14:30	8	1	0	0	0	0	9
2:45	1	0	0	0	0	0	1	14:45	4	0	0	0	0	0	4
3:00	2	0	0	0	0	0	2	15:00	4	0	0	0	0	0	4
3:15	5	0	0	0	0	0	5	15:15	6	0	0	0	0	0	6
3:30	4	0	0	0	0	0	4	15:30	7	1	0	0	0	0	8
3:45	3	0	0	0	0	0	3	15:45	6	0	0	0	0	0	6
4:00	5	0	0	0	0	0	5	16:00	10	0	0	0	0	0	10
4:15	4	0	0	0	0	0	4	16:15	6	0	0	0	0	0	6
4:30	8	3	0	0	0	0	11	16:30	9	0	0	0	0	0	9
4:45	7	0	0	0	0	0	7	16:45	9	0	0	0	0	0	9
5:00	4	2	0	0	0	0	6	17:00	8	0	0	0	0	0	8
5:15	4	2	0	0	0	0	6	17:15	8	0	0	0	0	0	8
5:30	3	0	0	0	0	0	3	17:30	9	0	0	0	0	0	9
5:45	1	0	0	0	0	0	1	17:45	5	0	0	0	0	0	5
6:00	2	0	0	0	0	0	2	18:00	4	0	0	0	0	0	4
6:15	6	1	0	0	0	0	7	18:15	7	0	0	0	0	0	7
6:30	4	0	0	0	0	0	4	18:30	4	0	0	0	0	0	4
6:45	4	1	0	0	0	0	5	18:45	6	0	0	0	0	0	6
7:00	7	0	0	0	0	0	7	19:00	4	1	0	0	0	0	5
7:15	5	0	0	1	0	0	6	19:15	6	0	0	0	0	0	6
7:30	5	0	0	0	0	0	5	19:30	10	0	0	0	0	0	10
7:45	3	0	0	0	0	0	3	19:45	6	0	0	0	0	0	6
8:00	4	2	0	0	0	0	6	20:00	4	0	0	0	0	0	4
8:15	7	0	0	0	0	0	7	20:15	2	0	0	0	0	0	2
8:30	7	0	0	0	0	0	7	20:30	1	0	0	1	0	0	2
8:45	5	0	0	0	0	0	5	20:45	5	0	0	0	0	0	5
9:00	7	0	1	0	0	0	8	21:00	8	0	1	0	0	0	9
9:15	8	0	0	0	0	0	8	21:15	5	0	0	0	0	0	5
9:30	6	1	0	0	0	0	7	21:30	0	0	0	0	0	0	0
9:45	4	0	0	0	0	0	4	21:45	1	0	0	0	0	0	1
10:00	5	0	0	0	0	0	5	22:00	3	0	0	0	0	0	3
10:15	2	0	0	0	0	0	2	22:15	1	0	0	0	0	0	1
10:30	5	0	0	0	0	0	5	22:30	0	0	0	0	0	0	0
10:45	4	0	0	0	0	0	4	22:45	2	0	0	0	0	0	2
11:00	7	0	0	0	0	0	7	23:00	0	0	0	0	0	0	0
11:15	6	0	0	0	0	0	6	23:15	0	0	0	0	0	0	0
11:30	3	0	0	0	0	0	3	23:30	3	1	0	0	0	0	4
11:45	5	1	0	0	0	0	6	23:45	2	0	0	0	0	0	2
TOTAL	192	13	1	1	0	0	207	TOTAL	243	8	3	1	0	0	255

AM PEAK HOUR	4:30 AM
AM PEAK VOLUME	30

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	34

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	435	21	4	2	0	0	462
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.2%	4.5%	0.9%	0.4%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	822	37	6	4	1	0	870
CLASS 6	Buses	% OF TOTAL	94.5%	4.3%	0.7%	0.5%	0.1%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY6 Estern dwy south of Bear Valley Rd (east of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	2	0	0	0	0	0	2
0:15	4	0	0	0	0	0	4
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	1	0	0	0	0	0	1
1:30	2	0	0	0	0	0	2
1:45	1	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0
2:15	1	0	0	0	0	0	1
2:30	0	0	0	0	0	0	0
2:45	3	0	0	0	0	0	3
3:00	3	0	0	0	0	0	3
3:15	1	0	0	0	0	0	1
3:30	5	0	0	0	0	0	5
3:45	1	1	0	0	0	0	2
4:00	2	0	0	0	0	0	2
4:15	4	0	0	0	0	0	4
4:30	2	0	0	0	0	0	2
4:45	8	0	0	0	0	0	8
5:00	3	1	0	0	0	0	4
5:15	3	0	0	0	0	0	3
5:30	7	1	0	0	0	0	8
5:45	1	0	0	0	0	0	1
6:00	1	0	0	0	0	0	1
6:15	2	0	0	0	0	0	2
6:30	2	2	0	0	0	0	4
6:45	4	1	0	0	0	0	5
7:00	5	0	0	0	0	0	5
7:15	5	0	0	1	0	0	6
7:30	7	0	0	0	0	0	7
7:45	1	2	0	0	0	0	3
8:00	1	0	0	0	0	0	1
8:15	4	0	0	0	0	0	4
8:30	7	0	0	0	0	0	7
8:45	3	0	0	0	0	0	3
9:00	6	1	1	0	0	0	8
9:15	5	0	0	0	0	0	5
9:30	7	0	0	0	0	0	7
9:45	6	0	0	0	0	0	6
10:00	6	0	0	0	0	0	6
10:15	4	0	0	0	0	0	4
10:30	3	0	0	0	0	0	3
10:45	5	0	1	0	0	0	6
11:00	4	0	0	0	0	0	4
11:15	4	0	0	0	0	0	4
11:30	6	0	0	0	0	0	6
11:45	3	1	0	0	0	0	4
TOTAL	157	10	2	1	0	0	170

AM PEAK HOUR	9:00 AM
AM PEAK VOLUME	26

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	3	0	0	0	0	0	3
12:15	6	0	0	0	0	0	6
12:30	1	0	0	1	0	0	2
12:45	5	0	0	0	0	0	5
13:00	7	0	0	0	0	0	7
13:15	14	0	0	0	0	0	14
13:30	4	0	0	0	1	0	5
13:45	4	0	0	0	0	0	4
14:00	5	0	0	0	0	0	5
14:15	5	0	0	0	0	0	5
14:30	7	0	0	0	0	0	7
14:45	4	0	0	0	0	0	4
15:00	10	0	0	0	0	0	10
15:15	5	0	0	0	0	0	5
15:30	5	0	0	0	0	0	5
15:45	4	0	0	0	0	0	4
16:00	5	0	0	0	0	0	5
16:15	6	1	0	0	0	0	7
16:30	5	0	0	0	0	0	5
16:45	9	1	0	0	0	0	10
17:00	9	0	0	0	0	0	9
17:15	4	0	0	0	0	0	4
17:30	8	0	0	0	0	0	8
17:45	11	0	0	0	0	0	11
18:00	8	1	0	0	0	0	9
18:15	3	0	0	0	0	0	3
18:30	4	0	0	0	0	0	4
18:45	4	0	0	0	0	0	4
19:00	4	1	0	0	0	0	5
19:15	2	0	0	0	0	0	2
19:30	6	0	0	0	0	0	6
19:45	6	0	0	0	0	0	6
20:00	4	1	0	0	0	0	5
20:15	2	0	0	0	0	0	2
20:30	5	0	0	0	0	0	5
20:45	6	0	0	0	0	0	6
21:00	6	0	0	0	0	0	6
21:15	5	0	0	0	0	0	5
21:30	4	0	0	0	0	0	4
21:45	2	0	0	0	0	0	2
22:00	1	0	0	0	0	0	1
22:15	3	0	0	0	0	0	3
22:30	2	0	0	0	0	0	2
22:45	1	0	0	0	0	0	1
23:00	1	0	0	0	0	0	1
23:15	0	0	0	0	0	0	0
23:30	2	1	0	0	0	0	3
23:45	3	0	0	0	0	0	3
TOTAL	230	6	0	1	1	0	238

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	32

TOTAL: AM+PM		387	16	2	2	1	0	408
% OF TOTAL		94.9%	3.9%	0.5%	0.5%	0.2%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY6 Estern dwy south of Bear Valley Rd (east of Mall Blvd)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	3	0	0	0	0	0	3	12:00	10	0	1	0	0	0	11
0:15	6	0	0	0	0	0	6	12:15	10	0	0	0	0	0	10
0:30	2	0	0	0	0	0	2	12:30	4	0	0	1	0	0	5
0:45	0	0	0	0	0	0	0	12:45	12	0	0	0	0	0	12
1:00	3	0	0	0	0	0	3	13:00	16	0	0	0	0	0	16
1:15	5	0	0	0	0	0	5	13:15	25	1	0	0	0	0	26
1:30	3	0	0	0	0	0	3	13:30	9	0	0	0	1	0	10
1:45	2	0	0	0	0	0	2	13:45	10	1	1	0	0	0	12
2:00	2	0	0	0	0	0	2	14:00	10	1	0	0	0	0	11
2:15	2	0	0	0	0	0	2	14:15	8	1	0	0	0	0	9
2:30	5	0	0	0	0	0	5	14:30	15	1	0	0	0	0	16
2:45	4	0	0	0	0	0	4	14:45	8	0	0	0	0	0	8
3:00	5	0	0	0	0	0	5	15:00	14	0	0	0	0	0	14
3:15	6	0	0	0	0	0	6	15:15	11	0	0	0	0	0	11
3:30	9	0	0	0	0	0	9	15:30	12	1	0	0	0	0	13
3:45	4	1	0	0	0	0	5	15:45	10	0	0	0	0	0	10
4:00	7	0	0	0	0	0	7	16:00	15	0	0	0	0	0	15
4:15	8	0	0	0	0	0	8	16:15	12	1	0	0	0	0	13
4:30	10	3	0	0	0	0	13	16:30	14	0	0	0	0	0	14
4:45	15	0	0	0	0	0	15	16:45	18	1	0	0	0	0	19
5:00	7	3	0	0	0	0	10	17:00	17	0	0	0	0	0	17
5:15	7	2	0	0	0	0	9	17:15	12	0	0	0	0	0	12
5:30	10	1	0	0	0	0	11	17:30	17	0	0	0	0	0	17
5:45	2	0	0	0	0	0	2	17:45	16	0	0	0	0	0	16
6:00	3	0	0	0	0	0	3	18:00	12	1	0	0	0	0	13
6:15	8	1	0	0	0	0	9	18:15	10	0	0	0	0	0	10
6:30	6	2	0	0	0	0	8	18:30	8	0	0	0	0	0	8
6:45	8	2	0	0	0	0	10	18:45	10	0	0	0	0	0	10
7:00	12	0	0	0	0	0	12	19:00	8	2	0	0	0	0	10
7:15	10	0	0	2	0	0	12	19:15	8	0	0	0	0	0	8
7:30	12	0	0	0	0	0	12	19:30	16	0	0	0	0	0	16
7:45	4	2	0	0	0	0	6	19:45	12	0	0	0	0	0	12
8:00	5	2	0	0	0	0	7	20:00	8	1	0	0	0	0	9
8:15	11	0	0	0	0	0	11	20:15	4	0	0	0	0	0	4
8:30	14	0	0	0	0	0	14	20:30	6	0	0	1	0	0	7
8:45	8	0	0	0	0	0	8	20:45	11	0	0	0	0	0	11
9:00	13	1	2	0	0	0	16	21:00	14	0	1	0	0	0	15
9:15	13	0	0	0	0	0	13	21:15	10	0	0	0	0	0	10
9:30	13	1	0	0	0	0	14	21:30	4	0	0	0	0	0	4
9:45	10	0	0	0	0	0	10	21:45	3	0	0	0	0	0	3
10:00	11	0	0	0	0	0	11	22:00	4	0	0	0	0	0	4
10:15	6	0	0	0	0	0	6	22:15	4	0	0	0	0	0	4
10:30	8	0	0	0	0	0	8	22:30	2	0	0	0	0	0	2
10:45	9	0	1	0	0	0	10	22:45	3	0	0	0	0	0	3
11:00	11	0	0	0	0	0	11	23:00	1	0	0	0	0	0	1
11:15	10	0	0	0	0	0	10	23:15	0	0	0	0	0	0	0
11:30	9	0	0	0	0	0	9	23:30	5	2	0	0	0	0	7
11:45	8	2	0	0	0	0	10	23:45	5	0	0	0	0	0	5
TOTAL	349	23	3	2	0	0	377	TOTAL	473	14	3	2	1	0	493

AM PEAK HOUR	9:00 AM	AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	53	AM PEAK VOLUME	65

TOTAL: AM+PM	822	37	6	4	1	0	870
% OF TOTAL	94.5%	4.3%	0.7%	0.5%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY7 Dwy west of Amargosa Rd (Valero)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	6	0	0	0	0	0	6
0:15	2	0	0	0	0	0	2	12:15	8	0	0	0	0	0	8
0:30	2	1	0	0	0	0	3	12:30	3	0	0	0	0	0	3
0:45	3	0	0	0	0	0	3	12:45	4	0	0	0	0	0	4
1:00	0	0	0	0	0	0	0	13:00	5	0	0	0	0	0	5
1:15	1	0	0	0	0	0	1	13:15	6	0	0	0	0	0	6
1:30	2	0	0	0	0	0	2	13:30	4	0	0	0	0	0	4
1:45	1	1	0	0	0	0	2	13:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1	14:00	4	0	0	0	0	0	4
2:15	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7
2:30	1	0	0	0	0	0	1	14:30	2	0	0	0	0	0	2
2:45	1	0	0	0	0	0	1	14:45	2	0	0	0	0	0	2
3:00	1	0	0	0	0	0	1	15:00	10	1	0	0	0	0	11
3:15	1	0	0	0	0	0	1	15:15	6	0	0	0	0	0	6
3:30	3	0	0	0	0	0	3	15:30	5	0	0	0	0	0	5
3:45	1	0	0	0	0	0	1	15:45	4	1	0	0	0	0	5
4:00	3	0	0	0	0	0	3	16:00	4	1	0	0	0	0	5
4:15	3	1	0	0	0	0	4	16:15	1	0	0	0	0	0	1
4:30	2	0	0	0	0	0	2	16:30	1	0	0	0	0	0	1
4:45	5	0	0	0	0	0	5	16:45	7	0	0	0	0	0	7
5:00	0	0	0	0	0	0	0	17:00	6	0	0	0	0	0	6
5:15	2	0	0	0	0	0	2	17:15	5	0	0	0	0	0	5
5:30	0	0	0	0	0	0	0	17:30	7	0	0	0	0	0	7
5:45	2	0	0	0	0	0	2	17:45	4	0	0	0	0	0	4
6:00	1	0	0	0	0	0	1	18:00	5	1	0	0	0	0	6
6:15	0	1	0	0	0	0	1	18:15	4	0	0	0	0	0	4
6:30	1	0	0	0	0	0	1	18:30	9	0	0	0	0	0	9
6:45	3	0	0	0	0	0	3	18:45	3	0	0	0	0	0	3
7:00	4	1	0	0	0	0	5	19:00	6	0	0	0	0	0	6
7:15	6	0	0	0	0	0	6	19:15	4	0	0	0	0	0	4
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	2	0	0	0	0	0	2	19:45	1	0	0	0	0	0	1
8:00	2	0	0	0	0	0	2	20:00	7	1	0	0	0	0	8
8:15	3	0	0	0	0	0	3	20:15	4	0	0	0	0	0	4
8:30	2	0	0	0	0	0	2	20:30	5	0	0	0	0	0	5
8:45	3	0	0	0	0	0	3	20:45	3	0	0	0	0	0	3
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	7	0	0	0	0	0	7	21:15	6	0	0	0	0	0	6
9:30	4	0	0	0	0	0	4	21:30	6	0	0	0	0	0	6
9:45	4	0	0	0	0	0	4	21:45	6	0	0	0	0	0	6
10:00	4	0	0	0	0	0	4	22:00	5	0	0	0	0	0	5
10:15	6	0	0	0	0	0	6	22:15	3	0	0	0	0	0	3
10:30	6	1	0	0	0	0	7	22:30	3	0	0	0	0	0	3
10:45	5	0	0	0	0	0	5	22:45	0	0	0	0	0	0	0
11:00	5	0	0	0	0	0	5	23:00	0	0	0	0	0	0	0
11:15	6	0	1	0	0	0	7	23:15	2	0	0	0	0	0	2
11:30	5	0	0	0	0	0	5	23:30	2	0	0	0	0	0	2
11:45	7	0	0	0	0	0	7	23:45	0	1	0	0	0	0	1
TOTAL	126	6	1	0	0	0	133	TOTAL	201	6	0	0	0	0	207

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	24	AM PEAK VOLUME	27

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	327	12	1	0	0	0	340
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.2%	3.5%	0.3%	0.0%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	331	12	1	0	0	0	344
CLASS 6	Buses	% OF TOTAL	96.2%	3.5%	0.3%	0.0%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY7 Dwy west of Amargosa Rd (Valero)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

AM PEAK HOUR	11:45 AM
AM PEAK VOLUME	0

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0
16:30	1	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0
22:15	1	0	0	0	0	0	1
22:30	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0
23:15	1	0	0	0	0	0	1
23:30	0	0	0	0	0	0	0
23:45	1	0	0	0	0	0	1
TOTAL	4	0	0	0	0	0	4

AM PEAK HOUR	11:15 PM
AM PEAK VOLUME	2

TOTAL: AM+PM	4	0	0	0	0	0	4
% OF TOTAL	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY7 Dwy west of Amargosa Rd (Valero)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	6	0	0	0	0	0	6
0:15	2	0	0	0	0	0	2	12:15	8	0	0	0	0	0	8
0:30	2	1	0	0	0	0	3	12:30	3	0	0	0	0	0	3
0:45	3	0	0	0	0	0	3	12:45	4	0	0	0	0	0	4
1:00	0	0	0	0	0	0	0	13:00	5	0	0	0	0	0	5
1:15	1	0	0	0	0	0	1	13:15	6	0	0	0	0	0	6
1:30	2	0	0	0	0	0	2	13:30	4	0	0	0	0	0	4
1:45	1	1	0	0	0	0	2	13:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1	14:00	4	0	0	0	0	0	4
2:15	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7
2:30	1	0	0	0	0	0	1	14:30	2	0	0	0	0	0	2
2:45	1	0	0	0	0	0	1	14:45	2	0	0	0	0	0	2
3:00	1	0	0	0	0	0	1	15:00	10	1	0	0	0	0	11
3:15	1	0	0	0	0	0	1	15:15	6	0	0	0	0	0	6
3:30	3	0	0	0	0	0	3	15:30	5	0	0	0	0	0	5
3:45	1	0	0	0	0	0	1	15:45	4	1	0	0	0	0	5
4:00	3	0	0	0	0	0	3	16:00	4	1	0	0	0	0	5
4:15	3	1	0	0	0	0	4	16:15	1	0	0	0	0	0	1
4:30	2	0	0	0	0	0	2	16:30	2	0	0	0	0	0	2
4:45	5	0	0	0	0	0	5	16:45	7	0	0	0	0	0	7
5:00	0	0	0	0	0	0	0	17:00	6	0	0	0	0	0	6
5:15	2	0	0	0	0	0	2	17:15	5	0	0	0	0	0	5
5:30	0	0	0	0	0	0	0	17:30	7	0	0	0	0	0	7
5:45	2	0	0	0	0	0	2	17:45	4	0	0	0	0	0	4
6:00	1	0	0	0	0	0	1	18:00	5	1	0	0	0	0	6
6:15	0	1	0	0	0	0	1	18:15	4	0	0	0	0	0	4
6:30	1	0	0	0	0	0	1	18:30	9	0	0	0	0	0	9
6:45	3	0	0	0	0	0	3	18:45	3	0	0	0	0	0	3
7:00	4	1	0	0	0	0	5	19:00	6	0	0	0	0	0	6
7:15	6	0	0	0	0	0	6	19:15	4	0	0	0	0	0	4
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	2	0	0	0	0	0	2	19:45	1	0	0	0	0	0	1
8:00	2	0	0	0	0	0	2	20:00	7	1	0	0	0	0	8
8:15	3	0	0	0	0	0	3	20:15	4	0	0	0	0	0	4
8:30	2	0	0	0	0	0	2	20:30	5	0	0	0	0	0	5
8:45	3	0	0	0	0	0	3	20:45	3	0	0	0	0	0	3
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	7	0	0	0	0	0	7	21:15	6	0	0	0	0	0	6
9:30	4	0	0	0	0	0	4	21:30	6	0	0	0	0	0	6
9:45	4	0	0	0	0	0	4	21:45	6	0	0	0	0	0	6
10:00	4	0	0	0	0	0	4	22:00	5	0	0	0	0	0	5
10:15	6	0	0	0	0	0	6	22:15	4	0	0	0	0	0	4
10:30	6	1	0	0	0	0	7	22:30	3	0	0	0	0	0	3
10:45	5	0	0	0	0	0	5	22:45	0	0	0	0	0	0	0
11:00	5	0	0	0	0	0	5	23:00	0	0	0	0	0	0	0
11:15	6	0	1	0	0	0	7	23:15	3	0	0	0	0	0	3
11:30	5	0	0	0	0	0	5	23:30	2	0	0	0	0	0	2
11:45	7	0	0	0	0	0	7	23:45	1	1	0	0	0	0	2
TOTAL	126	6	1	0	0	0	133	TOTAL	205	6	0	0	0	0	211

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	24

AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	27

TOTAL: AM+PM	331	12	1	0	0	0	344
% OF TOTAL	96.2%	3.5%	0.3%	0.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY8 Dwy west of Amargosa Rd (Applebee's Grill-Bar)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	2	0	0	0	0	0	2	12:00	14	0	0	1	0	0	15
0:15	0	0	0	0	0	0	0	12:15	12	0	0	0	0	0	12
0:30	1	0	0	0	0	0	1	12:30	12	0	0	0	0	0	12
0:45	0	0	0	0	0	0	0	12:45	11	0	0	1	0	0	12
1:00	0	0	0	0	0	0	0	13:00	5	0	0	0	0	0	5
1:15	1	0	0	0	0	0	1	13:15	11	1	0	0	1	1	14
1:30	0	0	0	0	0	0	0	13:30	4	1	0	1	0	0	6
1:45	0	0	0	0	0	0	0	13:45	8	1	0	0	0	0	9
2:00	0	0	0	0	0	0	0	14:00	4	1	0	0	0	0	5
2:15	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7
2:30	0	0	0	0	0	0	0	14:30	15	0	0	0	0	0	15
2:45	0	0	0	0	0	0	0	14:45	7	0	0	0	0	0	7
3:00	3	0	0	0	0	0	3	15:00	16	0	0	0	0	0	16
3:15	0	0	0	0	0	0	0	15:15	11	0	0	0	0	0	11
3:30	1	2	0	0	0	0	3	15:30	15	0	0	0	0	0	15
3:45	1	0	0	0	0	0	1	15:45	10	0	0	0	0	0	10
4:00	0	0	0	0	0	0	0	16:00	15	0	0	0	0	0	15
4:15	1	0	0	0	0	0	1	16:15	12	0	0	0	0	0	12
4:30	1	0	0	0	0	0	1	16:30	9	1	0	0	0	0	10
4:45	4	0	0	0	0	0	4	16:45	6	0	0	0	0	0	6
5:00	2	0	0	0	0	0	2	17:00	7	0	0	0	0	0	7
5:15	2	0	0	0	0	0	2	17:15	17	1	0	0	0	0	18
5:30	1	1	0	0	0	0	2	17:30	12	0	0	0	0	0	12
5:45	4	0	0	0	0	0	4	17:45	9	1	0	0	0	0	10
6:00	2	0	0	0	0	0	2	18:00	12	0	0	0	0	0	12
6:15	2	0	0	0	0	0	2	18:15	15	0	0	0	0	0	15
6:30	2	1	0	0	0	0	3	18:30	9	0	0	0	0	0	9
6:45	3	0	0	0	0	0	3	18:45	17	0	0	0	0	0	17
7:00	4	0	0	0	0	0	4	19:00	16	0	0	0	0	0	16
7:15	5	0	0	0	0	0	5	19:15	10	0	0	0	0	0	10
7:30	6	1	1	0	0	0	8	19:30	12	0	0	0	0	0	12
7:45	3	2	0	0	0	0	5	19:45	7	0	0	0	0	0	7
8:00	3	0	0	1	0	0	4	20:00	7	0	0	0	0	0	7
8:15	3	0	0	0	0	0	3	20:15	11	0	0	0	0	0	11
8:30	7	0	0	1	0	0	8	20:30	4	0	0	0	0	0	4
8:45	7	2	1	0	0	0	10	20:45	6	0	0	0	0	0	6
9:00	6	0	0	0	0	0	6	21:00	8	0	0	0	0	0	8
9:15	7	1	0	0	0	0	8	21:15	18	0	0	0	0	0	18
9:30	9	0	0	0	0	0	9	21:30	14	0	0	0	0	0	14
9:45	8	0	0	0	0	0	8	21:45	4	1	0	0	0	0	5
10:00	9	0	0	0	0	0	9	22:00	9	0	0	0	0	0	9
10:15	5	0	0	0	0	0	5	22:15	3	0	0	0	0	0	3
10:30	4	0	0	0	0	0	4	22:30	9	0	0	0	0	0	9
10:45	5	1	0	1	0	0	7	22:45	5	0	0	0	0	0	5
11:00	7	0	0	0	0	0	7	23:00	1	0	0	1	0	0	2
11:15	10	0	0	0	0	0	10	23:15	4	0	0	0	0	0	4
11:30	6	1	0	0	0	0	7	23:30	1	1	0	0	0	0	2
11:45	15	0	0	1	0	0	16	23:45	1	0	0	0	0	0	1
TOTAL	162	12	2	4	0	0	180	**TOTAL**	452	9	0	4	1	1	467

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	40

AM PEAK HOUR	6:15 PM
AM PEAK VOLUME	57

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	614	21	2	8	1	1	647
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	94.9%	3.2%	0.3%	1.2%	0.2%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	1,103	46	7	10	1	1	1,168
CLASS 6	Buses	**% OF TOTAL**	94.4%	3.9%	0.6%	0.9%	0.1%	0.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY8 Dwy west of Amargosa Rd (Applebee's Grill-Bar)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	6	0	0	0	0	0	6
0:15	5	0	0	0	0	0	5
0:30	2	1	0	0	0	0	3
0:45	5	0	0	0	0	0	5
1:00	2	0	0	0	0	0	2
1:15	1	0	0	0	0	0	1
1:30	4	0	0	0	0	0	4
1:45	2	0	0	0	0	0	2
2:00	2	0	0	0	0	0	2
2:15	3	0	0	0	0	0	3
2:30	2	0	0	0	0	0	2
2:45	0	0	0	0	0	0	0
3:00	1	0	0	0	0	0	1
3:15	2	0	0	0	0	0	2
3:30	1	0	0	0	0	0	1
3:45	4	0	0	0	0	0	4
4:00	4	0	0	0	0	0	4
4:15	4	2	0	0	0	0	6
4:30	2	4	0	0	0	0	6
4:45	6	0	0	0	0	0	6
5:00	3	0	0	0	0	0	3
5:15	0	2	0	0	0	0	2
5:30	2	0	0	0	0	0	2
5:45	1	1	0	0	0	0	2
6:00	3	1	0	0	0	0	4
6:15	6	0	0	0	0	0	6
6:30	4	0	0	0	0	0	4
6:45	3	0	0	0	0	0	3
7:00	2	1	0	0	0	0	3
7:15	4	1	0	0	0	0	5
7:30	5	0	0	0	0	0	5
7:45	3	0	1	0	0	0	4
8:00	2	3	0	1	0	0	6
8:15	3	0	0	0	0	0	3
8:30	4	0	0	0	0	0	4
8:45	5	0	0	0	0	0	5
9:00	2	1	1	0	0	0	4
9:15	9	0	0	0	0	0	9
9:30	10	1	0	0	0	0	11
9:45	5	0	0	0	0	0	5
10:00	2	0	0	0	0	0	2
10:15	2	0	0	0	0	0	2
10:30	6	0	0	0	0	0	6
10:45	9	1	0	0	0	0	10
11:00	6	0	0	0	0	0	6
11:15	8	0	0	0	0	0	8
11:30	2	0	1	0	0	0	3
11:45	6	0	0	0	0	0	6
TOTAL	175	19	3	1	0	0	198

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	30

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	7	0	0	0	0	0	7
12:15	5	0	0	0	0	0	5
12:30	9	0	0	0	0	0	9
12:45	7	0	0	0	0	0	7
13:00	1	0	0	0	0	0	1
13:15	6	0	0	0	0	0	6
13:30	5	0	0	0	0	0	5
13:45	3	0	0	0	0	0	3
14:00	7	4	1	0	0	0	12
14:15	7	1	0	0	0	0	8
14:30	5	0	0	0	0	0	5
14:45	4	0	0	0	0	0	4
15:00	7	1	0	0	0	0	8
15:15	6	0	0	0	0	0	6
15:30	10	0	0	0	0	0	10
15:45	6	0	0	0	0	0	6
16:00	7	0	0	0	0	0	7
16:15	7	0	0	0	0	0	7
16:30	6	0	0	0	0	0	6
16:45	5	0	0	0	0	0	5
17:00	4	0	0	0	0	0	4
17:15	7	0	0	0	0	0	7
17:30	11	0	0	0	0	0	11
17:45	9	0	0	0	0	0	9
18:00	9	0	0	0	0	0	9
18:15	9	0	0	0	0	0	9
18:30	11	0	0	0	0	0	11
18:45	8	0	0	0	0	0	8
19:00	7	0	0	0	0	0	7
19:15	8	0	1	0	0	0	9
19:30	10	0	0	0	0	0	10
19:45	5	0	0	0	0	0	5
20:00	11	0	0	0	0	0	11
20:15	9	0	0	0	0	0	9
20:30	3	0	0	1	0	0	4
20:45	4	0	0	0	0	0	4
21:00	12	0	0	0	0	0	12
21:15	5	0	0	0	0	0	5
21:30	12	0	0	0	0	0	12
21:45	4	0	0	0	0	0	4
22:00	9	0	0	0	0	0	9
22:15	7	0	0	0	0	0	7
22:30	1	0	0	0	0	0	1
22:45	7	0	0	0	0	0	7
23:00	3	0	0	0	0	0	3
23:15	3	0	0	0	0	0	3
23:30	4	0	0	0	0	0	4
23:45	2	0	0	0	0	0	2
TOTAL	314	6	2	1	0	0	323

AM PEAK HOUR	5:45 PM
AM PEAK VOLUME	38

TOTAL: AM+PM	489	25	5	2	0	0	521
% OF TOTAL	93.9%	4.8%	1.0%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY8 Dwy west of Amargosa Rd (Applebee's Grill-Bar)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	12:00	21	0	0	1	0	0	22
0:15	5	0	0	0	0	0	5	12:15	17	0	0	0	0	0	17
0:30	3	1	0	0	0	0	4	12:30	21	0	0	0	0	0	21
0:45	5	0	0	0	0	0	5	12:45	18	0	0	1	0	0	19
1:00	2	0	0	0	0	0	2	13:00	6	0	0	0	0	0	6
1:15	2	0	0	0	0	0	2	13:15	17	1	0	0	1	1	20
1:30	4	0	0	0	0	0	4	13:30	9	1	0	1	0	0	11
1:45	2	0	0	0	0	0	2	13:45	11	1	0	0	0	0	12
2:00	2	0	0	0	0	0	2	14:00	11	5	1	0	0	0	17
2:15	3	0	0	0	0	0	3	14:15	14	1	0	0	0	0	15
2:30	2	0	0	0	0	0	2	14:30	20	0	0	0	0	0	20
2:45	0	0	0	0	0	0	0	14:45	11	0	0	0	0	0	11
3:00	4	0	0	0	0	0	4	15:00	23	1	0	0	0	0	24
3:15	2	0	0	0	0	0	2	15:15	17	0	0	0	0	0	17
3:30	2	2	0	0	0	0	4	15:30	25	0	0	0	0	0	25
3:45	5	0	0	0	0	0	5	15:45	16	0	0	0	0	0	16
4:00	4	0	0	0	0	0	4	16:00	22	0	0	0	0	0	22
4:15	5	2	0	0	0	0	7	16:15	19	0	0	0	0	0	19
4:30	3	4	0	0	0	0	7	16:30	15	1	0	0	0	0	16
4:45	10	0	0	0	0	0	10	16:45	11	0	0	0	0	0	11
5:00	5	0	0	0	0	0	5	17:00	11	0	0	0	0	0	11
5:15	2	2	0	0	0	0	4	17:15	24	1	0	0	0	0	25
5:30	3	1	0	0	0	0	4	17:30	23	0	0	0	0	0	23
5:45	5	1	0	0	0	0	6	17:45	18	1	0	0	0	0	19
6:00	5	1	0	0	0	0	6	18:00	21	0	0	0	0	0	21
6:15	8	0	0	0	0	0	8	18:15	24	0	0	0	0	0	24
6:30	6	1	0	0	0	0	7	18:30	20	0	0	0	0	0	20
6:45	6	0	0	0	0	0	6	18:45	25	0	0	0	0	0	25
7:00	6	1	0	0	0	0	7	19:00	23	0	0	0	0	0	23
7:15	9	1	0	0	0	0	10	19:15	18	0	1	0	0	0	19
7:30	11	1	1	0	0	0	13	19:30	22	0	0	0	0	0	22
7:45	6	2	1	0	0	0	9	19:45	12	0	0	0	0	0	12
8:00	5	3	0	2	0	0	10	20:00	18	0	0	0	0	0	18
8:15	6	0	0	0	0	0	6	20:15	20	0	0	0	0	0	20
8:30	11	0	0	1	0	0	12	20:30	7	0	0	1	0	0	8
8:45	12	2	1	0	0	0	15	20:45	10	0	0	0	0	0	10
9:00	8	1	1	0	0	0	10	21:00	20	0	0	0	0	0	20
9:15	16	1	0	0	0	0	17	21:15	23	0	0	0	0	0	23
9:30	19	1	0	0	0	0	20	21:30	26	0	0	0	0	0	26
9:45	13	0	0	0	0	0	13	21:45	8	1	0	0	0	0	9
10:00	11	0	0	0	0	0	11	22:00	18	0	0	0	0	0	18
10:15	7	0	0	0	0	0	7	22:15	10	0	0	0	0	0	10
10:30	10	0	0	0	0	0	10	22:30	10	0	0	0	0	0	10
10:45	14	2	0	1	0	0	17	22:45	12	0	0	0	0	0	12
11:00	13	0	0	0	0	0	13	23:00	4	0	0	1	0	0	5
11:15	18	0	0	0	0	0	18	23:15	7	0	0	0	0	0	7
11:30	8	1	1	0	0	0	10	23:30	5	1	0	0	0	0	6
11:45	21	0	0	1	0	0	22	23:45	3	0	0	0	0	0	3
TOTAL	337	31	5	5	0	0	378	**TOTAL**	766	15	2	5	1	1	790

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	63

AM PEAK HOUR	6:15 PM
AM PEAK VOLUME	92

TOTAL: AM+PM	1,103	46	7	10	1	1	1,168
% OF TOTAL	94.4%	3.9%	0.6%	0.9%	0.1%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY9 Dwy west of Amargosa Rd (Mimi's Cafe)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	7	0	0	0	0	0	7
0:15	0	0	0	0	0	0	0	12:15	4	0	0	0	0	0	4
0:30	0	0	0	0	0	0	0	12:30	5	0	0	0	0	0	5
0:45	0	0	0	0	0	0	0	12:45	3	0	0	0	0	0	3
1:00	0	0	0	0	0	0	0	13:00	4	0	0	0	0	0	4
1:15	0	0	0	0	0	0	0	13:15	3	0	0	0	0	0	3
1:30	0	0	0	0	0	0	0	13:30	6	0	0	1	0	0	7
1:45	0	0	0	0	0	0	0	13:45	2	1	0	0	0	0	3
2:00	0	0	0	0	0	0	0	14:00	5	0	0	0	0	0	5
2:15	0	0	0	0	0	0	0	14:15	4	0	0	0	0	0	4
2:30	0	0	0	0	0	0	0	14:30	7	0	0	0	0	0	7
2:45	0	0	0	0	0	0	0	14:45	9	1	0	0	0	0	10
3:00	0	0	0	0	0	0	0	15:00	5	0	0	0	0	0	5
3:15	0	0	0	0	0	0	0	15:15	8	0	0	0	0	0	8
3:30	0	0	0	0	0	0	0	15:30	7	0	0	0	0	0	7
3:45	0	0	0	0	0	0	0	15:45	8	0	0	0	0	0	8
4:00	0	0	0	0	0	0	0	16:00	6	0	0	0	0	0	6
4:15	0	0	0	0	0	0	0	16:15	4	0	0	0	0	0	4
4:30	0	0	0	0	0	0	0	16:30	9	0	0	1	0	0	10
4:45	0	0	0	0	0	0	0	16:45	5	0	0	0	0	0	5
5:00	0	0	0	0	0	0	0	17:00	10	0	0	0	0	0	10
5:15	0	0	0	0	0	0	0	17:15	9	0	0	1	0	0	10
5:30	0	1	0	0	0	0	1	17:30	4	0	0	0	0	0	4
5:45	2	0	0	0	0	0	2	17:45	5	0	0	0	0	0	5
6:00	1	0	0	0	0	0	1	18:00	6	0	0	0	0	0	6
6:15	0	0	0	0	0	0	0	18:15	6	0	0	0	0	0	6
6:30	0	0	0	0	0	0	0	18:30	2	0	0	0	0	0	2
6:45	2	0	0	0	0	0	2	18:45	3	0	0	0	0	0	3
7:00	3	0	0	0	0	0	3	19:00	2	0	0	0	0	0	2
7:15	0	0	0	0	0	0	0	19:15	6	0	0	0	0	0	6
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	1	0	0	0	0	0	1	19:45	6	0	0	0	0	0	6
8:00	2	0	0	0	0	0	2	20:00	5	1	0	0	0	0	6
8:15	3	0	0	0	0	0	3	20:15	2	0	0	0	0	0	2
8:30	4	0	0	0	0	0	4	20:30	2	0	0	0	0	0	2
8:45	4	0	0	0	0	0	4	20:45	2	0	0	0	0	0	2
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	5	0	0	0	0	0	5	21:15	0	0	0	0	0	0	0
9:30	2	0	0	0	0	0	2	21:30	3	0	0	0	0	0	3
9:45	9	0	0	0	0	0	9	21:45	3	0	0	0	0	0	3
10:00	4	0	0	0	0	0	4	22:00	2	0	0	0	0	0	2
10:15	6	0	0	0	0	0	6	22:15	2	0	0	0	0	0	2
10:30	9	0	0	0	0	0	9	22:30	1	0	0	0	0	0	1
10:45	6	0	0	0	0	0	6	22:45	1	0	0	0	0	0	1
11:00	5	0	0	0	0	0	5	23:00	1	0	0	0	0	0	1
11:15	7	0	0	0	0	0	7	23:15	0	0	0	0	0	0	0
11:30	5	0	1	0	0	0	6	23:30	1	0	0	0	0	0	1
11:45	6	0	0	0	0	0	6	23:45	0	0	0	0	0	0	0
TOTAL	89	1	1	0	0	0	91	**TOTAL**	201	3	0	3	0	0	207

AM PEAK HOUR	9:45 AM
AM PEAK VOLUME	28

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	35

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	290	4	1	3	0	0	298
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	97.3%	1.3%	0.3%	1.0%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	537	11	1	4	0	0	553
CLASS 6	Buses	**% OF TOTAL**	97.1%	2.0%	0.2%	0.7%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY9 Dwy west of Amargosa Rd (Mimi's Cafe)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	1	0	0	0	0	0	1
1:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	1	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	1	0	0	0	0	0	1
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0
7:00	1	0	0	0	0	0	1
7:15	2	0	0	0	0	0	2
7:30	0	0	0	1	0	0	1
7:45	1	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0
8:15	1	1	0	0	0	0	2
8:30	1	0	0	0	0	0	1
8:45	2	0	0	0	0	0	2
9:00	3	0	0	0	0	0	3
9:15	2	0	0	0	0	0	2
9:30	0	0	0	0	0	0	0
9:45	6	0	0	0	0	0	6
10:00	3	1	0	0	0	0	4
10:15	1	0	0	0	0	0	1
10:30	5	0	0	0	0	0	5
10:45	2	0	0	0	0	0	2
11:00	6	0	0	0	0	0	6
11:15	1	0	0	0	0	0	1
11:30	7	0	0	0	0	0	7
11:45	2	0	0	0	0	0	2
TOTAL	51	2	0	1	0	0	54

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	16

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	5	0	0	0	0	0	5
12:15	5	0	0	0	0	0	5
12:30	8	0	0	0	0	0	8
12:45	7	0	0	0	0	0	7
13:00	6	0	0	0	0	0	6
13:15	4	0	0	0	0	0	4
13:30	5	0	0	0	0	0	5
13:45	6	1	0	0	0	0	7
14:00	6	0	0	0	0	0	6
14:15	5	1	0	0	0	0	6
14:30	5	0	0	0	0	0	5
14:45	4	0	0	0	0	0	4
15:00	2	0	0	0	0	0	2
15:15	4	0	0	0	0	0	4
15:30	3	1	0	0	0	0	4
15:45	3	0	0	0	0	0	3
16:00	4	0	0	0	0	0	4
16:15	3	1	0	0	0	0	4
16:30	0	0	0	0	0	0	0
16:45	7	0	0	0	0	0	7
17:00	5	0	0	0	0	0	5
17:15	7	0	0	0	0	0	7
17:30	7	0	0	0	0	0	7
17:45	10	0	0	0	0	0	10
18:00	2	0	0	0	0	0	2
18:15	4	0	0	0	0	0	4
18:30	10	0	0	0	0	0	10
18:45	6	0	0	0	0	0	6
19:00	3	0	0	0	0	0	3
19:15	3	0	0	0	0	0	3
19:30	2	0	0	0	0	0	2
19:45	4	0	0	0	0	0	4
20:00	1	0	0	0	0	0	1
20:15	3	0	0	0	0	0	3
20:30	7	0	0	0	0	0	7
20:45	1	0	0	0	0	0	1
21:00	4	0	0	0	0	0	4
21:15	3	0	0	0	0	0	3
21:30	2	0	0	0	0	0	2
21:45	4	0	0	0	0	0	4
22:00	1	0	0	0	0	0	1
22:15	5	0	0	0	0	0	5
22:30	1	0	0	0	0	0	1
22:45	2	0	0	0	0	0	2
23:00	3	0	0	0	0	0	3
23:15	1	1	0	0	0	0	2
23:30	1	0	0	0	0	0	1
23:45	2	0	0	0	0	0	2
TOTAL	196	5	0	0	0	0	201

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	29

TOTAL: AM+PM	247	7	0	1	0	0	255
% OF TOTAL	96.9%	2.7%	0.0%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY9 Dwy west of Amargosa Rd (Mimi's Cafe)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	12	0	0	0	0	0	12
0:15	0	0	0	0	0	0	0	12:15	9	0	0	0	0	0	9
0:30	0	0	0	0	0	0	0	12:30	13	0	0	0	0	0	13
0:45	1	0	0	0	0	0	1	12:45	10	0	0	0	0	0	10
1:00	1	0	0	0	0	0	1	13:00	10	0	0	0	0	0	10
1:15	0	0	0	0	0	0	0	13:15	7	0	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	11	0	0	1	0	0	12
1:45	1	0	0	0	0	0	1	13:45	8	2	0	0	0	0	10
2:00	0	0	0	0	0	0	0	14:00	11	0	0	0	0	0	11
2:15	0	0	0	0	0	0	0	14:15	9	1	0	0	0	0	10
2:30	0	0	0	0	0	0	0	14:30	12	0	0	0	0	0	12
2:45	0	0	0	0	0	0	0	14:45	13	1	0	0	0	0	14
3:00	0	0	0	0	0	0	0	15:00	7	0	0	0	0	0	7
3:15	0	0	0	0	0	0	0	15:15	12	0	0	0	0	0	12
3:30	0	0	0	0	0	0	0	15:30	10	1	0	0	0	0	11
3:45	0	0	0	0	0	0	0	15:45	11	0	0	0	0	0	11
4:00	0	0	0	0	0	0	0	16:00	10	0	0	0	0	0	10
4:15	0	0	0	0	0	0	0	16:15	7	1	0	0	0	0	8
4:30	0	0	0	0	0	0	0	16:30	9	0	0	1	0	0	10
4:45	0	0	0	0	0	0	0	16:45	12	0	0	0	0	0	12
5:00	1	0	0	0	0	0	1	17:00	15	0	0	0	0	0	15
5:15	0	0	0	0	0	0	0	17:15	16	0	0	1	0	0	17
5:30	0	1	0	0	0	0	1	17:30	11	0	0	0	0	0	11
5:45	2	0	0	0	0	0	2	17:45	15	0	0	0	0	0	15
6:00	1	0	0	0	0	0	1	18:00	8	0	0	0	0	0	8
6:15	0	0	0	0	0	0	0	18:15	10	0	0	0	0	0	10
6:30	0	0	0	0	0	0	0	18:30	12	0	0	0	0	0	12
6:45	2	0	0	0	0	0	2	18:45	9	0	0	0	0	0	9
7:00	4	0	0	0	0	0	4	19:00	5	0	0	0	0	0	5
7:15	2	0	0	0	0	0	2	19:15	9	0	0	0	0	0	9
7:30	0	0	0	1	0	0	1	19:30	5	0	0	0	0	0	5
7:45	2	0	0	0	0	0	2	19:45	10	0	0	0	0	0	10
8:00	2	0	0	0	0	0	2	20:00	6	1	0	0	0	0	7
8:15	4	1	0	0	0	0	5	20:15	5	0	0	0	0	0	5
8:30	5	0	0	0	0	0	5	20:30	9	0	0	0	0	0	9
8:45	6	0	0	0	0	0	6	20:45	3	0	0	0	0	0	3
9:00	6	0	0	0	0	0	6	21:00	7	0	0	0	0	0	7
9:15	7	0	0	0	0	0	7	21:15	3	0	0	0	0	0	3
9:30	2	0	0	0	0	0	2	21:30	5	0	0	0	0	0	5
9:45	15	0	0	0	0	0	15	21:45	7	0	0	0	0	0	7
10:00	7	1	0	0	0	0	8	22:00	3	0	0	0	0	0	3
10:15	7	0	0	0	0	0	7	22:15	7	0	0	0	0	0	7
10:30	14	0	0	0	0	0	14	22:30	2	0	0	0	0	0	2
10:45	8	0	0	0	0	0	8	22:45	3	0	0	0	0	0	3
11:00	11	0	0	0	0	0	11	23:00	4	0	0	0	0	0	4
11:15	8	0	0	0	0	0	8	23:15	1	1	0	0	0	0	2
11:30	12	0	1	0	0	0	13	23:30	2	0	0	0	0	0	2
11:45	8	0	0	0	0	0	8	23:45	2	0	0	0	0	0	2
TOTAL	140	3	1	1	0	0	145	TOTAL	397	8	0	3	0	0	408

AM PEAK HOUR	9:45 AM	AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	44	AM PEAK VOLUME	58

TOTAL: AM+PM	537	11	1	4	0	0	553
% OF TOTAL	97.1%	2.0%	0.2%	0.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY10 Dwy west of Amargosa Rd (Freddy's Frozen)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	11	0	0	0	0	0	11
0:15	1	0	0	0	0	0	1	12:15	11	0	0	0	0	0	11
0:30	0	0	0	0	0	0	0	12:30	15	0	0	0	0	0	15
0:45	1	0	0	0	0	0	1	12:45	4	0	0	0	0	0	4
1:00	0	0	0	0	0	0	0	13:00	7	1	0	0	0	0	8
1:15	0	0	0	0	0	0	0	13:15	8	0	0	0	0	0	8
1:30	0	0	0	0	0	0	0	13:30	5	1	0	0	0	0	6
1:45	0	0	0	0	0	0	0	13:45	10	0	0	0	0	0	10
2:00	0	0	0	0	0	0	0	14:00	8	1	0	0	0	0	9
2:15	0	0	0	0	0	0	0	14:15	6	0	0	0	0	0	6
2:30	0	0	0	0	0	0	0	14:30	6	0	0	0	0	0	6
2:45	0	0	0	0	0	0	0	14:45	8	0	0	0	0	0	8
3:00	0	0	0	0	0	0	0	15:00	8	0	0	0	0	0	8
3:15	0	0	0	0	0	0	0	15:15	10	0	0	0	0	0	10
3:30	0	0	0	0	0	0	0	15:30	14	0	0	0	0	0	14
3:45	0	0	0	0	0	0	0	15:45	13	0	0	0	0	0	13
4:00	0	0	0	0	0	0	0	16:00	6	0	0	0	0	0	6
4:15	0	0	0	0	0	0	0	16:15	7	0	0	0	0	0	7
4:30	0	0	0	0	0	0	0	16:30	9	0	0	0	0	0	9
4:45	0	0	0	0	0	0	0	16:45	10	0	0	0	0	0	10
5:00	0	0	0	0	0	0	0	17:00	10	0	0	0	0	0	10
5:15	0	0	0	0	0	0	0	17:15	8	0	0	0	0	0	8
5:30	0	0	0	0	0	0	0	17:30	5	0	0	0	0	0	5
5:45	0	0	0	0	0	0	0	17:45	15	0	0	0	0	0	15
6:00	1	0	0	0	0	0	1	18:00	9	1	0	0	0	0	10
6:15	2	0	0	0	0	0	2	18:15	7	0	0	0	0	0	7
6:30	0	0	0	0	0	0	0	18:30	4	0	0	0	0	0	4
6:45	1	0	0	0	0	0	1	18:45	5	0	0	1	0	0	6
7:00	0	0	0	1	0	0	1	19:00	8	0	0	0	0	0	8
7:15	1	0	0	1	0	0	2	19:15	8	0	0	0	0	0	8
7:30	0	0	0	0	0	0	0	19:30	5	0	0	0	0	0	5
7:45	1	0	0	0	0	0	1	19:45	10	0	0	0	0	0	10
8:00	4	0	0	0	0	0	4	20:00	5	0	0	0	0	0	5
8:15	2	0	0	0	0	0	2	20:15	9	0	0	0	0	0	9
8:30	2	0	0	0	0	0	2	20:30	7	0	0	0	0	0	7
8:45	3	0	0	0	0	0	3	20:45	5	0	0	0	0	0	5
9:00	7	1	0	0	0	0	8	21:00	5	0	0	0	0	0	5
9:15	3	0	0	0	0	0	3	21:15	3	0	0	0	0	0	3
9:30	3	0	0	0	0	0	3	21:30	2	0	0	0	0	0	2
9:45	6	1	0	0	0	0	7	21:45	4	0	0	0	0	0	4
10:00	4	1	0	0	0	0	5	22:00	1	0	0	0	0	0	1
10:15	5	0	0	0	0	0	5	22:15	1	0	0	0	0	0	1
10:30	3	0	0	1	0	0	4	22:30	1	0	0	0	0	0	1
10:45	5	0	0	0	0	0	5	22:45	0	0	0	0	0	0	0
11:00	7	0	0	0	0	0	7	23:00	0	0	0	0	0	0	0
11:15	8	0	0	0	0	0	8	23:15	0	0	0	0	0	0	0
11:30	12	0	0	0	0	0	12	23:30	1	0	0	0	0	0	1
11:45	5	0	0	1	0	0	6	23:45	0	1	0	0	0	0	1
TOTAL	88	3	0	4	0	0	95	TOTAL	314	5	0	1	0	0	320

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	33

AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	45

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	402	8	0	5	0	0	415
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.9%	1.9%	0.0%	1.2%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	707	19	2	5	0	0	733
CLASS 6	Buses	% OF TOTAL	96.5%	2.6%	0.3%	0.7%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY10 Dwy west of Amargosa Rd (Freddy's Frozen)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	1	0	0	0	0	0	1
0:45	1	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	2	0	0	0	0	0	2
7:00	1	0	0	0	0	0	1
7:15	0	1	0	0	0	0	1
7:30	1	0	0	0	0	0	1
7:45	0	0	0	0	0	0	0
8:00	2	0	0	0	0	0	2
8:15	1	0	0	0	0	0	1
8:30	2	0	0	0	0	0	2
8:45	1	0	0	0	0	0	1
9:00	1	0	0	0	0	0	1
9:15	2	0	0	0	0	0	2
9:30	2	0	0	0	0	0	2
9:45	4	0	0	0	0	0	4
10:00	2	0	0	0	0	0	2
10:15	4	0	0	0	0	0	4
10:30	3	0	0	0	0	0	3
10:45	2	0	0	0	0	0	2
11:00	9	0	0	0	0	0	9
11:15	8	1	0	0	0	0	9
11:30	4	0	0	0	0	0	4
11:45	5	0	0	0	0	0	5
TOTAL	59	2	0	0	0	0	61

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	27

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	3	1	1	0	0	0	5
12:15	2	1	0	0	0	0	3
12:30	9	0	0	0	0	0	9
12:45	6	0	0	0	0	0	6
13:00	8	1	0	0	0	0	9
13:15	7	0	0	0	0	0	7
13:30	8	2	0	0	0	0	10
13:45	12	0	0	0	0	0	12
14:00	5	0	0	0	0	0	5
14:15	4	1	0	0	0	0	5
14:30	4	0	0	0	0	0	4
14:45	8	1	0	0	0	0	9
15:00	5	0	0	0	0	0	5
15:15	5	0	0	0	0	0	5
15:30	9	0	1	0	0	0	10
15:45	5	1	0	0	0	0	6
16:00	6	0	0	0	0	0	6
16:15	11	0	0	0	0	0	11
16:30	7	0	0	0	0	0	7
16:45	8	0	0	0	0	0	8
17:00	6	0	0	0	0	0	6
17:15	4	0	0	0	0	0	4
17:30	8	0	0	0	0	0	8
17:45	8	0	0	0	0	0	8
18:00	5	0	0	0	0	0	5
18:15	7	0	0	0	0	0	7
18:30	3	0	0	0	0	0	3
18:45	10	0	0	0	0	0	10
19:00	4	0	0	0	0	0	4
19:15	6	0	0	0	0	0	6
19:30	4	0	0	0	0	0	4
19:45	5	1	0	0	0	0	6
20:00	6	0	0	0	0	0	6
20:15	4	0	0	0	0	0	4
20:30	4	0	0	0	0	0	4
20:45	8	0	0	0	0	0	8
21:00	5	0	0	0	0	0	5
21:15	5	0	0	0	0	0	5
21:30	6	0	0	0	0	0	6
21:45	2	0	0	0	0	0	2
22:00	1	0	0	0	0	0	1
22:15	1	0	0	0	0	0	1
22:30	0	0	0	0	0	0	0
22:45	1	0	0	0	0	0	1
23:00	1	0	0	0	0	0	1
23:15	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	246	9	2	0	0	0	257

AM PEAK HOUR	1:00 PM
AM PEAK VOLUME	38

TOTAL: AM+PM		305	11	2	0	0	0	318
% OF TOTAL		95.9%	3.5%	0.6%	0.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY10 Dwy west of Amargosa Rd (Freddy's Frozen)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	14	1	1	0	0	0	16
0:15	1	0	0	0	0	0	1	12:15	13	1	0	0	0	0	14
0:30	1	0	0	0	0	0	1	12:30	24	0	0	0	0	0	24
0:45	2	0	0	0	0	0	2	12:45	10	0	0	0	0	0	10
1:00	0	0	0	0	0	0	0	13:00	15	2	0	0	0	0	17
1:15	0	0	0	0	0	0	0	13:15	15	0	0	0	0	0	15
1:30	0	0	0	0	0	0	0	13:30	13	3	0	0	0	0	16
1:45	0	0	0	0	0	0	0	13:45	22	0	0	0	0	0	22
2:00	0	0	0	0	0	0	0	14:00	13	1	0	0	0	0	14
2:15	0	0	0	0	0	0	0	14:15	10	1	0	0	0	0	11
2:30	0	0	0	0	0	0	0	14:30	10	0	0	0	0	0	10
2:45	0	0	0	0	0	0	0	14:45	16	1	0	0	0	0	17
3:00	0	0	0	0	0	0	0	15:00	13	0	0	0	0	0	13
3:15	0	0	0	0	0	0	0	15:15	15	0	0	0	0	0	15
3:30	0	0	0	0	0	0	0	15:30	23	0	1	0	0	0	24
3:45	0	0	0	0	0	0	0	15:45	18	1	0	0	0	0	19
4:00	0	0	0	0	0	0	0	16:00	12	0	0	0	0	0	12
4:15	0	0	0	0	0	0	0	16:15	18	0	0	0	0	0	18
4:30	0	0	0	0	0	0	0	16:30	16	0	0	0	0	0	16
4:45	0	0	0	0	0	0	0	16:45	18	0	0	0	0	0	18
5:00	0	0	0	0	0	0	0	17:00	16	0	0	0	0	0	16
5:15	0	0	0	0	0	0	0	17:15	12	0	0	0	0	0	12
5:30	0	0	0	0	0	0	0	17:30	13	0	0	0	0	0	13
5:45	0	0	0	0	0	0	0	17:45	23	0	0	0	0	0	23
6:00	2	0	0	0	0	0	2	18:00	14	1	0	0	0	0	15
6:15	2	0	0	0	0	0	2	18:15	14	0	0	0	0	0	14
6:30	0	0	0	0	0	0	0	18:30	7	0	0	0	0	0	7
6:45	3	0	0	0	0	0	3	18:45	15	0	0	1	0	0	16
7:00	1	0	0	1	0	0	2	19:00	12	0	0	0	0	0	12
7:15	1	1	0	1	0	0	3	19:15	14	0	0	0	0	0	14
7:30	1	0	0	0	0	0	1	19:30	9	0	0	0	0	0	9
7:45	1	0	0	0	0	0	1	19:45	15	1	0	0	0	0	16
8:00	6	0	0	0	0	0	6	20:00	11	0	0	0	0	0	11
8:15	3	0	0	0	0	0	3	20:15	13	0	0	0	0	0	13
8:30	4	0	0	0	0	0	4	20:30	11	0	0	0	0	0	11
8:45	4	0	0	0	0	0	4	20:45	13	0	0	0	0	0	13
9:00	8	1	0	0	0	0	9	21:00	10	0	0	0	0	0	10
9:15	5	0	0	0	0	0	5	21:15	8	0	0	0	0	0	8
9:30	5	0	0	0	0	0	5	21:30	8	0	0	0	0	0	8
9:45	10	1	0	0	0	0	11	21:45	6	0	0	0	0	0	6
10:00	6	1	0	0	0	0	7	22:00	2	0	0	0	0	0	2
10:15	9	0	0	0	0	0	9	22:15	2	0	0	0	0	0	2
10:30	6	0	0	1	0	0	7	22:30	1	0	0	0	0	0	1
10:45	7	0	0	0	0	0	7	22:45	1	0	0	0	0	0	1
11:00	16	0	0	0	0	0	16	23:00	1	0	0	0	0	0	1
11:15	16	1	0	0	0	0	17	23:15	0	0	0	0	0	0	0
11:30	16	0	0	0	0	0	16	23:30	1	0	0	0	0	0	1
11:45	10	0	0	1	0	0	11	23:45	0	1	0	0	0	0	1
TOTAL	147	5	0	4	0	0	156	TOTAL	560	14	2	1	0	0	577

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	60

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	73

TOTAL: AM+PM	707	19	2	5	0	0	733
% OF TOTAL	96.5%	2.6%	0.3%	0.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY11 Dwy west of Amargosa Rd (Johnny Carino's)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	16	1	0	0	0	0	17
0:15	0	0	0	0	0	0	0	12:15	17	0	1	0	0	0	18
0:30	0	0	0	0	0	0	0	12:30	12	1	0	0	0	0	13
0:45	0	0	0	0	0	0	0	12:45	6	0	0	0	0	0	6
1:00	0	0	0	0	0	0	0	13:00	6	0	0	0	0	0	6
1:15	0	0	0	0	0	0	0	13:15	6	1	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	13	1	0	1	0	0	15
1:45	0	0	0	0	0	0	0	13:45	11	0	0	0	0	0	11
2:00	0	0	0	0	0	0	0	14:00	6	0	0	1	0	0	7
2:15	0	0	0	0	0	0	0	14:15	2	0	0	0	0	0	2
2:30	0	0	0	0	0	0	0	14:30	4	0	0	0	0	0	4
2:45	0	0	0	0	0	0	0	14:45	7	0	1	1	0	0	9
3:00	0	0	0	0	0	0	0	15:00	11	0	0	0	0	0	11
3:15	0	0	0	0	0	0	0	15:15	8	0	0	0	0	0	8
3:30	0	0	0	0	0	0	0	15:30	5	0	0	0	0	0	5
3:45	0	0	0	0	0	0	0	15:45	10	0	0	0	0	0	10
4:00	0	0	0	0	0	0	0	16:00	13	0	0	0	0	0	13
4:15	0	0	0	0	0	0	0	16:15	13	0	0	0	0	0	13
4:30	0	0	0	0	0	0	0	16:30	10	0	0	0	0	0	10
4:45	0	0	0	0	0	0	0	16:45	7	0	0	0	0	0	7
5:00	0	0	0	0	0	0	0	17:00	7	1	0	0	0	0	8
5:15	0	0	0	0	0	0	0	17:15	13	0	0	0	0	0	13
5:30	0	0	0	0	0	0	0	17:30	9	0	0	0	0	0	9
5:45	1	0	0	0	0	0	1	17:45	9	0	0	0	0	0	9
6:00	2	0	0	0	0	0	2	18:00	10	0	0	0	0	0	10
6:15	1	0	0	0	0	0	1	18:15	14	0	0	0	0	0	14
6:30	0	0	0	0	0	0	0	18:30	16	0	0	0	0	0	16
6:45	0	0	0	0	0	0	0	18:45	11	0	0	0	0	0	11
7:00	1	0	0	0	0	0	1	19:00	4	0	0	0	0	0	4
7:15	2	0	0	0	0	0	2	19:15	14	0	0	0	0	0	14
7:30	2	0	0	0	0	0	2	19:30	2	0	0	0	0	0	2
7:45	1	0	0	0	0	0	1	19:45	8	0	0	0	0	0	8
8:00	5	0	0	0	0	0	5	20:00	9	0	0	0	0	0	9
8:15	2	0	0	0	0	0	2	20:15	7	0	0	0	0	0	7
8:30	7	0	0	0	0	0	7	20:30	2	0	0	0	0	0	2
8:45	4	0	0	0	0	0	4	20:45	5	0	0	0	0	0	5
9:00	4	0	0	0	0	0	4	21:00	0	0	0	0	0	0	0
9:15	9	1	0	0	0	0	10	21:15	2	0	0	0	0	0	2
9:30	3	0	0	0	0	0	3	21:30	3	0	0	0	0	0	3
9:45	2	1	0	0	0	0	3	21:45	1	0	0	0	0	0	1
10:00	4	0	0	0	0	0	4	22:00	2	0	0	0	0	0	2
10:15	5	0	0	1	0	0	6	22:15	0	0	0	0	0	0	0
10:30	6	0	0	0	0	0	6	22:30	0	0	0	0	0	0	0
10:45	4	0	0	0	0	0	4	22:45	0	0	0	0	0	0	0
11:00	10	0	0	0	0	0	10	23:00	1	0	0	0	0	0	1
11:15	6	2	0	0	0	0	8	23:15	0	0	0	0	0	0	0
11:30	9	0	0	0	0	0	9	23:30	0	0	0	0	0	0	0
11:45	11	0	0	0	0	0	11	23:45	0	0	0	0	0	0	0
TOTAL	101	4	0	1	0	0	106	TOTAL	332	5	2	3	0	0	342

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	38

AM PEAK HOUR	12:00 PM
AM PEAK VOLUME	54

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	433	9	2	4	0	0	448
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.7%	2.0%	0.4%	0.9%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	778	18	2	10	0	0	808
CLASS 6	Buses	% OF TOTAL	96.3%	2.2%	0.2%	1.2%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY11 Dwy west of Amargosa Rd (Johnny Carino's)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0
8:15	5	0	0	1	0	0	6
8:30	1	0	0	0	0	0	1
8:45	4	0	0	0	0	0	4
9:00	4	0	0	0	0	0	4
9:15	6	1	0	0	0	0	7
9:30	6	0	0	0	0	0	6
9:45	4	1	0	0	0	0	5
10:00	3	1	0	0	0	0	4
10:15	5	0	0	0	0	0	5
10:30	8	0	0	0	0	0	8
10:45	4	0	0	0	0	0	4
11:00	6	0	0	0	0	0	6
11:15	1	0	0	0	0	0	1
11:30	3	0	0	0	0	0	3
11:45	5	1	0	0	0	0	6
TOTAL	66	4	0	1	0	0	71

AM PEAK HOUR	10:15 AM
AM PEAK VOLUME	23

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	5	0	0	0	0	0	5
12:15	7	1	0	0	0	0	8
12:30	1	0	0	0	0	0	1
12:45	6	0	0	0	0	0	6
13:00	6	0	0	1	0	0	7
13:15	10	0	0	0	0	0	10
13:30	13	0	0	0	0	0	13
13:45	4	0	0	0	0	0	4
14:00	2	1	0	1	0	0	4
14:15	11	0	0	0	0	0	11
14:30	4	0	0	0	0	0	4
14:45	7	0	0	0	0	0	7
15:00	10	0	0	0	0	0	10
15:15	5	0	0	0	0	0	5
15:30	4	0	0	0	0	0	4
15:45	9	0	0	0	0	0	9
16:00	4	1	0	0	0	0	5
16:15	4	1	0	0	0	0	5
16:30	4	0	0	0	0	0	4
16:45	8	0	0	0	0	0	8
17:00	14	0	0	0	0	0	14
17:15	9	0	0	1	0	0	10
17:30	11	0	0	0	0	0	11
17:45	8	0	0	0	0	0	8
18:00	7	1	0	0	0	0	8
18:15	3	0	0	0	0	0	3
18:30	11	0	0	0	0	0	11
18:45	6	0	0	0	0	0	6
19:00	9	0	0	0	0	0	9
19:15	5	0	0	1	0	0	6
19:30	5	0	0	0	0	0	5
19:45	10	0	0	0	0	0	10
20:00	5	0	0	0	0	0	5
20:15	6	0	0	0	0	0	6
20:30	10	0	0	0	0	0	10
20:45	9	0	0	0	0	0	9
21:00	2	0	0	1	0	0	3
21:15	5	0	0	0	0	0	5
21:30	7	0	0	0	0	0	7
21:45	4	0	0	0	0	0	4
22:00	4	0	0	0	0	0	4
22:15	0	0	0	0	0	0	0
22:30	1	0	0	0	0	0	1
22:45	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0
23:15	1	0	0	0	0	0	1
23:30	2	0	0	0	0	0	2
23:45	1	0	0	0	0	0	1
TOTAL	279	5	0	5	0	0	289

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	43

TOTAL: AM+PM	345	9	0	6	0	0	360
% OF TOTAL	95.8%	2.5%	0.0%	1.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY11 Dwy west of Amargosa Rd (Johnny Carino's)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	21	1	0	0	0	0	22
0:15	0	0	0	0	0	0	0	12:15	24	1	1	0	0	0	26
0:30	0	0	0	0	0	0	0	12:30	13	1	0	0	0	0	14
0:45	0	0	0	0	0	0	0	12:45	12	0	0	0	0	0	12
1:00	0	0	0	0	0	0	0	13:00	12	0	0	1	0	0	13
1:15	0	0	0	0	0	0	0	13:15	16	1	0	0	0	0	17
1:30	0	0	0	0	0	0	0	13:30	26	1	0	1	0	0	28
1:45	0	0	0	0	0	0	0	13:45	15	0	0	0	0	0	15
2:00	0	0	0	0	0	0	0	14:00	8	1	0	2	0	0	11
2:15	0	0	0	0	0	0	0	14:15	13	0	0	0	0	0	13
2:30	0	0	0	0	0	0	0	14:30	8	0	0	0	0	0	8
2:45	0	0	0	0	0	0	0	14:45	14	0	1	1	0	0	16
3:00	0	0	0	0	0	0	0	15:00	21	0	0	0	0	0	21
3:15	0	0	0	0	0	0	0	15:15	13	0	0	0	0	0	13
3:30	0	0	0	0	0	0	0	15:30	9	0	0	0	0	0	9
3:45	0	0	0	0	0	0	0	15:45	19	0	0	0	0	0	19
4:00	0	0	0	0	0	0	0	16:00	17	1	0	0	0	0	18
4:15	0	0	0	0	0	0	0	16:15	17	1	0	0	0	0	18
4:30	0	0	0	0	0	0	0	16:30	14	0	0	0	0	0	14
4:45	0	0	0	0	0	0	0	16:45	15	0	0	0	0	0	15
5:00	0	0	0	0	0	0	0	17:00	21	1	0	0	0	0	22
5:15	0	0	0	0	0	0	0	17:15	22	0	0	1	0	0	23
5:30	0	0	0	0	0	0	0	17:30	20	0	0	0	0	0	20
5:45	1	0	0	0	0	0	1	17:45	17	0	0	0	0	0	17
6:00	3	0	0	0	0	0	3	18:00	17	1	0	0	0	0	18
6:15	1	0	0	0	0	0	1	18:15	17	0	0	0	0	0	17
6:30	0	0	0	0	0	0	0	18:30	27	0	0	0	0	0	27
6:45	0	0	0	0	0	0	0	18:45	17	0	0	0	0	0	17
7:00	1	0	0	0	0	0	1	19:00	13	0	0	0	0	0	13
7:15	2	0	0	0	0	0	2	19:15	19	0	0	1	0	0	20
7:30	2	0	0	0	0	0	2	19:30	7	0	0	0	0	0	7
7:45	1	0	0	0	0	0	1	19:45	18	0	0	0	0	0	18
8:00	5	0	0	0	0	0	5	20:00	14	0	0	0	0	0	14
8:15	7	0	0	1	0	0	8	20:15	13	0	0	0	0	0	13
8:30	8	0	0	0	0	0	8	20:30	12	0	0	0	0	0	12
8:45	8	0	0	0	0	0	8	20:45	14	0	0	0	0	0	14
9:00	8	0	0	0	0	0	8	21:00	2	0	0	1	0	0	3
9:15	15	2	0	0	0	0	17	21:15	7	0	0	0	0	0	7
9:30	9	0	0	0	0	0	9	21:30	10	0	0	0	0	0	10
9:45	6	2	0	0	0	0	8	21:45	5	0	0	0	0	0	5
10:00	7	1	0	0	0	0	8	22:00	6	0	0	0	0	0	6
10:15	10	0	0	1	0	0	11	22:15	0	0	0	0	0	0	0
10:30	14	0	0	0	0	0	14	22:30	1	0	0	0	0	0	1
10:45	8	0	0	0	0	0	8	22:45	0	0	0	0	0	0	0
11:00	16	0	0	0	0	0	16	23:00	1	0	0	0	0	0	1
11:15	7	2	0	0	0	0	9	23:15	1	0	0	0	0	0	1
11:30	12	0	0	0	0	0	12	23:30	2	0	0	0	0	0	2
11:45	16	1	0	0	0	0	17	23:45	1	0	0	0	0	0	1
TOTAL	167	8	0	2	0	0	177	**TOTAL**	611	10	2	8	0	0	631

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	54

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	82

TOTAL: AM+PM	778	18	2	10	0	0	808
% OF TOTAL	96.3%	2.2%	0.2%	1.2%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY12 Dwy west of Amargosa Rd (Main dwy to the Parking Lot)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	47	0	0	0	0	1	48
0:15	2	0	0	0	0	0	2	12:15	49	1	0	0	0	1	51
0:30	1	0	0	0	0	0	1	12:30	54	0	0	0	0	0	54
0:45	2	0	0	0	0	0	2	12:45	43	0	0	0	0	0	43
1:00	3	0	0	0	0	0	3	13:00	46	0	0	0	0	1	47
1:15	1	0	0	0	0	0	1	13:15	46	0	0	0	0	1	47
1:30	0	0	0	0	0	0	0	13:30	38	1	0	0	0	0	39
1:45	0	0	0	0	0	0	0	13:45	48	1	0	0	0	1	50
2:00	0	0	0	0	0	0	0	14:00	30	0	0	0	0	1	31
2:15	1	0	0	0	0	0	1	14:15	42	0	0	0	0	1	43
2:30	1	0	0	0	0	0	1	14:30	41	1	0	0	0	0	42
2:45	1	0	0	0	0	0	1	14:45	43	1	1	0	0	0	45
3:00	1	0	0	0	0	0	1	15:00	44	0	0	0	0	1	45
3:15	0	0	0	0	0	0	0	15:15	42	0	0	0	0	1	43
3:30	1	0	0	0	0	0	1	15:30	51	1	0	0	0	1	53
3:45	0	0	0	0	0	0	0	15:45	53	0	1	0	0	0	54
4:00	0	0	0	0	0	0	0	16:00	39	0	0	0	0	1	40
4:15	0	0	0	0	0	0	0	16:15	49	0	0	0	0	0	49
4:30	4	0	0	0	0	0	4	16:30	49	0	1	1	0	1	52
4:45	6	0	0	0	0	0	6	16:45	53	0	0	0	0	1	54
5:00	1	1	0	0	0	0	2	17:00	33	0	0	0	0	1	34
5:15	1	1	0	0	0	0	2	17:15	54	0	0	0	0	0	54
5:30	3	1	0	0	0	0	4	17:30	46	0	0	1	0	0	47
5:45	8	0	0	0	0	0	8	17:45	35	0	0	0	0	2	37
6:00	17	0	0	0	0	0	17	18:00	41	0	0	0	0	0	41
6:15	10	0	1	0	0	0	11	18:15	43	0	0	0	0	0	43
6:30	17	0	0	0	0	0	17	18:30	38	0	0	0	0	0	38
6:45	15	0	0	0	0	1	16	18:45	51	0	0	0	0	1	52
7:00	18	1	0	0	0	0	19	19:00	45	0	0	0	0	0	45
7:15	16	0	0	0	0	0	16	19:15	28	1	0	0	0	0	29
7:30	14	0	0	0	0	0	14	19:30	43	0	0	0	0	0	43
7:45	16	0	0	0	0	1	17	19:45	38	0	0	0	0	0	38
8:00	26	0	0	1	0	0	27	20:00	44	0	0	1	0	1	46
8:15	36	1	0	1	0	0	38	20:15	25	1	0	0	0	0	26
8:30	32	0	0	0	0	0	32	20:30	36	1	0	1	0	0	38
8:45	33	0	0	0	0	1	34	20:45	30	0	0	0	0	0	30
9:00	35	1	0	1	0	1	38	21:00	21	0	0	0	0	1	22
9:15	37	0	0	0	0	1	38	21:15	25	0	0	0	0	0	25
9:30	28	0	0	0	0	0	28	21:30	21	0	0	0	0	0	21
9:45	46	1	0	0	0	0	47	21:45	13	0	0	0	0	0	13
10:00	46	0	0	0	0	1	47	22:00	13	0	0	0	0	0	13
10:15	51	0	0	0	0	0	51	22:15	11	0	0	0	0	0	11
10:30	48	2	0	0	0	1	51	22:30	6	0	1	0	0	0	7
10:45	42	1	0	0	0	1	44	22:45	7	0	0	0	0	0	7
11:00	48	0	0	0	0	1	49	23:00	2	0	0	0	0	0	2
11:15	44	0	0	0	0	0	44	23:15	2	0	0	0	0	0	2
11:30	46	1	0	0	0	0	47	23:30	1	0	0	0	0	0	1
11:45	45	0	0	0	0	1	46	23:45	0	0	0	0	0	0	0
TOTAL	804	11	1	3	0	10	829	TOTAL	1,659	9	4	4	0	19	1,695

AM PEAK HOUR	9:45 AM	AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	196	AM PEAK VOLUME	196

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	2,463	20	5	7	0	29	2,524
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	97.6%	0.8%	0.2%	0.3%	0.0%	1.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	5,019	46	9	17	1	57	5,149
CLASS 6	Buses	% OF TOTAL	97.5%	0.9%	0.2%	0.3%	0.0%	1.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY12 Dwy west of Amargosa Rd (Main dwy to the Parking Lot)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	2	0	0	0	0	0	2
0:15	4	0	0	0	0	0	4
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	4	0	0	0	0	0	4
1:15	1	0	0	0	0	0	1
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1
2:15	1	0	0	0	0	0	1
2:30	0	0	0	0	0	0	0
2:45	1	0	0	0	0	0	1
3:00	1	0	0	0	0	0	1
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	1	0	0	0	0	0	1
4:30	0	0	0	0	0	0	0
4:45	1	0	0	0	0	0	1
5:00	2	1	0	0	0	0	3
5:15	0	0	0	0	0	0	0
5:30	1	0	0	0	0	0	1
5:45	1	0	0	0	0	0	1
6:00	9	0	0	0	0	1	10
6:15	8	0	0	0	0	0	8
6:30	12	0	1	0	0	0	13
6:45	19	0	0	1	0	0	20
7:00	18	1	0	0	0	1	20
7:15	19	1	0	0	0	0	20
7:30	22	0	0	0	0	0	22
7:45	16	0	0	0	0	0	16
8:00	14	0	0	0	0	1	15
8:15	15	0	0	0	0	0	15
8:30	32	0	0	0	0	0	32
8:45	27	0	0	1	0	0	28
9:00	32	0	0	0	0	1	33
9:15	29	1	0	0	0	0	30
9:30	39	1	0	0	0	1	41
9:45	33	0	0	0	0	0	33
10:00	41	1	0	0	0	0	42
10:15	32	0	0	0	0	1	33
10:30	38	0	0	0	0	0	38
10:45	45	2	0	0	1	1	49
11:00	49	1	0	0	0	1	51
11:15	50	0	0	0	0	0	50
11:30	42	0	0	0	0	1	43
11:45	51	0	0	0	0	0	51
TOTAL	714	9	1	2	1	9	736

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	195

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	48	0	0	0	0	1	49
12:15	51	3	0	0	0	1	55
12:30	45	0	0	0	0	1	46
12:45	49	1	0	1	0	0	51
13:00	59	0	0	0	0	0	59
13:15	42	0	0	0	0	1	43
13:30	42	1	0	1	0	1	45
13:45	48	0	0	0	0	0	48
14:00	52	1	0	0	0	0	53
14:15	38	1	1	0	0	2	42
14:30	34	0	0	0	0	1	35
14:45	49	0	0	1	0	0	50
15:00	47	1	1	0	0	0	49
15:15	42	2	0	0	0	1	45
15:30	42	1	0	0	0	1	44
15:45	44	1	0	0	0	0	45
16:00	54	0	0	0	0	1	55
16:15	45	0	0	0	0	1	46
16:30	59	0	0	0	0	0	59
16:45	41	0	0	0	0	1	42
17:00	55	1	0	1	0	1	58
17:15	38	0	0	0	0	0	38
17:30	41	0	0	0	0	0	41
17:45	57	0	0	0	0	0	57
18:00	45	1	0	0	0	1	47
18:15	44	0	0	0	0	1	45
18:30	35	0	0	0	0	0	35
18:45	60	1	0	0	0	0	61
19:00	45	1	0	0	0	0	46
19:15	41	0	0	1	0	1	43
19:30	39	0	0	1	0	0	40
19:45	42	0	0	1	0	0	43
20:00	39	0	0	0	0	0	39
20:15	56	0	0	1	0	1	58
20:30	43	0	0	0	0	0	43
20:45	33	0	0	0	0	0	33
21:00	28	0	0	0	0	1	29
21:15	24	1	0	0	0	0	25
21:30	24	0	0	0	0	0	24
21:45	17	0	0	0	0	0	17
22:00	23	0	0	0	0	0	23
22:15	18	0	0	0	0	0	18
22:30	14	0	0	0	0	0	14
22:45	22	0	0	0	0	0	22
23:00	13	0	0	0	0	0	13
23:15	6	0	1	0	0	0	7
23:30	3	0	0	0	0	0	3
23:45	6	0	0	0	0	0	6
TOTAL	1,842	17	3	8	0	19	1,889

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	211

TOTAL: AM+PM	2,556	26	4	10	1	28	2,625
% OF TOTAL	97.4%	1.0%	0.2%	0.4%	0.0%	1.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY12 Dwy west of Amargosa Rd (Main dwy to the Parking Lot)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	3	0	0	0	0	0	3	12:00	95	0	0	0	0	2	97
0:15	6	0	0	0	0	0	6	12:15	100	4	0	0	0	2	106
0:30	2	0	0	0	0	0	2	12:30	99	0	0	0	0	1	100
0:45	2	0	0	0	0	0	2	12:45	92	1	0	1	0	0	94
1:00	7	0	0	0	0	0	7	13:00	105	0	0	0	0	1	106
1:15	2	0	0	0	0	0	2	13:15	88	0	0	0	0	2	90
1:30	0	0	0	0	0	0	0	13:30	80	2	0	1	0	1	84
1:45	0	0	0	0	0	0	0	13:45	96	1	0	0	0	1	98
2:00	1	0	0	0	0	0	1	14:00	82	1	0	0	0	1	84
2:15	2	0	0	0	0	0	2	14:15	80	1	1	0	0	3	85
2:30	1	0	0	0	0	0	1	14:30	75	1	0	0	0	1	77
2:45	2	0	0	0	0	0	2	14:45	92	1	1	1	0	0	95
3:00	2	0	0	0	0	0	2	15:00	91	1	1	0	0	1	94
3:15	0	0	0	0	0	0	0	15:15	84	2	0	0	0	2	88
3:30	1	0	0	0	0	0	1	15:30	93	2	0	0	0	2	97
3:45	0	0	0	0	0	0	0	15:45	97	1	1	0	0	0	99
4:00	0	0	0	0	0	0	0	16:00	93	0	0	0	0	2	95
4:15	1	0	0	0	0	0	1	16:15	94	0	0	0	0	1	95
4:30	4	0	0	0	0	0	4	16:30	108	0	1	1	0	1	111
4:45	7	0	0	0	0	0	7	16:45	94	0	0	0	0	2	96
5:00	3	2	0	0	0	0	5	17:00	88	1	0	1	0	2	92
5:15	1	1	0	0	0	0	2	17:15	92	0	0	0	0	0	92
5:30	4	1	0	0	0	0	5	17:30	87	0	0	1	0	0	88
5:45	9	0	0	0	0	0	9	17:45	92	0	0	0	0	2	94
6:00	26	0	0	0	0	1	27	18:00	86	1	0	0	0	1	88
6:15	18	0	1	0	0	0	19	18:15	87	0	0	0	0	1	88
6:30	29	0	1	0	0	0	30	18:30	73	0	0	0	0	0	73
6:45	34	0	0	1	0	1	36	18:45	111	1	0	0	0	1	113
7:00	36	2	0	0	0	1	39	19:00	90	1	0	0	0	0	91
7:15	35	1	0	0	0	0	36	19:15	69	1	0	1	0	1	72
7:30	36	0	0	0	0	0	36	19:30	82	0	0	1	0	0	83
7:45	32	0	0	0	0	1	33	19:45	80	0	0	1	0	0	81
8:00	40	0	0	1	0	1	42	20:00	83	0	0	1	0	1	85
8:15	51	1	0	1	0	0	53	20:15	81	1	0	1	0	1	84
8:30	64	0	0	0	0	0	64	20:30	79	1	0	1	0	0	81
8:45	60	0	0	1	0	1	62	20:45	63	0	0	0	0	0	63
9:00	67	1	0	1	0	2	71	21:00	49	0	0	0	0	2	51
9:15	66	1	0	0	0	1	68	21:15	49	1	0	0	0	0	50
9:30	67	1	0	0	0	1	69	21:30	45	0	0	0	0	0	45
9:45	79	1	0	0	0	0	80	21:45	30	0	0	0	0	0	30
10:00	87	1	0	0	0	1	89	22:00	36	0	0	0	0	0	36
10:15	83	0	0	0	0	1	84	22:15	29	0	0	0	0	0	29
10:30	86	2	0	0	0	1	89	22:30	20	0	1	0	0	0	21
10:45	87	3	0	0	1	2	93	22:45	29	0	0	0	0	0	29
11:00	97	1	0	0	0	2	100	23:00	15	0	0	0	0	0	15
11:15	94	0	0	0	0	0	94	23:15	8	0	1	0	0	0	9
11:30	88	1	0	0	0	1	90	23:30	4	0	0	0	0	0	4
11:45	96	0	0	0	0	1	97	23:45	6	0	0	0	0	0	6
TOTAL	1,518	20	2	5	1	19	1,565	**TOTAL**	3,501	26	7	12	0	38	3,584

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	381

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	406

TOTAL: AM+PM	5,019	46	9	17	1	57	5,149
% OF TOTAL	97.5%	0.9%	0.2%	0.3%	0.0%	1.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY13 Dwy west of Amargosa Rd (south of Main dwy)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	20	0	0	0	0	0	20
0:15	0	0	0	0	0	0	0	12:15	10	0	0	0	0	0	10
0:30	0	0	0	0	0	0	0	12:30	19	0	0	0	0	0	19
0:45	1	0	0	0	0	0	1	12:45	17	0	0	0	0	0	17
1:00	0	0	0	0	0	0	0	13:00	15	0	0	0	0	0	15
1:15	0	0	0	0	0	0	0	13:15	25	2	0	1	0	0	28
1:30	0	0	0	0	0	0	0	13:30	21	0	0	0	0	0	21
1:45	0	0	0	0	0	0	0	13:45	18	0	0	0	0	0	18
2:00	0	0	0	0	0	0	0	14:00	20	0	0	0	0	0	20
2:15	0	0	0	0	0	0	0	14:15	22	1	0	0	0	0	23
2:30	0	0	0	0	0	0	0	14:30	13	0	0	0	0	0	13
2:45	1	0	0	0	0	0	1	14:45	17	1	0	0	0	0	18
3:00	1	0	0	0	0	0	1	15:00	11	0	0	0	0	0	11
3:15	0	0	0	0	0	0	0	15:15	21	0	0	0	0	0	21
3:30	1	0	0	0	0	0	1	15:30	14	0	0	0	0	0	14
3:45	2	0	0	0	0	0	2	15:45	14	1	0	0	0	0	15
4:00	1	0	0	0	0	0	1	16:00	19	0	0	0	0	0	19
4:15	0	0	0	0	0	0	0	16:15	23	0	0	0	0	0	23
4:30	2	0	0	0	0	0	2	16:30	27	0	0	0	0	0	27
4:45	1	0	0	0	0	0	1	16:45	14	0	0	0	0	0	14
5:00	4	0	0	0	0	0	4	17:00	20	0	0	0	0	0	20
5:15	3	0	0	0	0	0	3	17:15	16	0	0	0	0	0	16
5:30	2	0	0	0	0	0	2	17:30	17	1	0	0	0	0	18
5:45	6	0	0	0	0	0	6	17:45	13	0	0	0	0	0	13
6:00	3	0	0	0	0	0	3	18:00	18	0	0	0	0	0	18
6:15	10	0	0	0	0	0	10	18:15	26	0	0	0	0	0	26
6:30	8	0	0	0	0	0	8	18:30	20	0	0	1	0	0	21
6:45	13	3	0	0	0	0	16	18:45	21	0	0	0	0	0	21
7:00	4	1	0	0	0	0	5	19:00	16	0	0	0	0	0	16
7:15	10	0	0	0	0	0	10	19:15	15	0	0	0	0	0	15
7:30	9	0	0	0	0	0	9	19:30	11	0	0	1	0	0	12
7:45	3	0	0	0	0	0	3	19:45	15	0	0	0	0	0	15
8:00	9	0	0	0	0	0	9	20:00	19	0	0	0	0	0	19
8:15	5	0	0	0	0	0	5	20:15	15	0	0	0	0	0	15
8:30	9	0	0	0	0	0	9	20:30	11	0	0	0	0	0	11
8:45	11	0	0	0	0	0	11	20:45	17	0	0	0	0	0	17
9:00	24	0	0	0	0	0	24	21:00	11	1	0	0	0	0	12
9:15	11	0	0	0	0	0	11	21:15	10	0	0	0	0	0	10
9:30	17	0	0	0	0	0	17	21:30	6	0	0	0	0	0	6
9:45	17	1	0	0	0	0	18	21:45	23	0	0	0	0	0	23
10:00	20	0	0	0	0	0	20	22:00	8	0	0	0	0	0	8
10:15	20	0	0	0	0	0	20	22:15	6	0	0	0	0	0	6
10:30	24	0	0	0	0	0	24	22:30	5	0	0	0	0	0	5
10:45	18	0	0	0	0	0	18	22:45	1	0	0	0	0	0	1
11:00	25	0	0	0	0	0	25	23:00	1	0	0	0	0	0	1
11:15	11	0	0	0	0	0	11	23:15	1	0	0	0	0	0	1
11:30	26	0	0	1	0	0	27	23:30	3	0	0	0	0	0	3
11:45	16	0	0	0	0	0	16	23:45	0	0	0	0	0	0	0
TOTAL	349	5	0	1	0	0	355	TOTAL	705	7	0	3	0	0	715
	AM PEAK HOUR						10:15 AM						AM PEAK HOUR		1:15 PM
	AM PEAK VOLUME						87						AM PEAK VOLUME		87

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	1,054	12	0	4	0	0	1,070
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	98.5%	1.1%	0.0%	0.4%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	2,082	26	2	6	1	0	2,117
CLASS 6	Buses	% OF TOTAL	98.3%	1.2%	0.1%	0.3%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY13 Dwy west of Amargosa Rd (south of Main dwy)

AM TIME	OUT 1	2	3	4	5	6	TOTAL	PM Time	OUT 1	2	3	4	5	6	TOTAL
0:00	4	0	0	0	0	0	4	12:00	15	0	0	0	0	0	15
0:15	1	0	0	0	0	0	1	12:15	13	0	0	0	0	0	13
0:30	0	0	0	0	0	0	0	12:30	20	0	0	0	0	0	20
0:45	1	0	0	0	0	0	1	12:45	18	0	0	0	0	0	18
1:00	1	0	0	0	0	0	1	13:00	14	2	1	0	0	0	17
1:15	1	0	0	0	0	0	1	13:15	20	0	0	0	0	0	20
1:30	0	0	0	0	0	0	0	13:30	19	0	0	0	0	0	19
1:45	0	0	0	0	0	0	0	13:45	24	1	0	0	0	0	25
2:00	2	0	0	0	0	0	2	14:00	26	0	0	0	0	0	26
2:15	0	0	0	0	0	0	0	14:15	16	1	0	1	1	0	19
2:30	0	0	0	0	0	0	0	14:30	17	1	0	0	0	0	18
2:45	0	0	0	0	0	0	0	14:45	21	0	0	0	0	0	21
3:00	0	0	0	0	0	0	0	15:00	13	0	0	0	0	0	13
3:15	0	0	0	0	0	0	0	15:15	19	0	0	0	0	0	19
3:30	0	0	0	0	0	0	0	15:30	17	0	1	1	0	0	19
3:45	0	0	0	0	0	0	0	15:45	23	0	0	0	0	0	23
4:00	1	0	0	0	0	0	1	16:00	28	0	0	0	0	0	28
4:15	0	0	0	0	0	0	0	16:15	19	0	0	0	0	0	19
4:30	0	0	0	0	0	0	0	16:30	13	1	0	0	0	0	14
4:45	0	0	0	0	0	0	0	16:45	27	0	0	0	0	0	27
5:00	1	0	0	0	0	0	1	17:00	19	0	0	0	0	0	19
5:15	0	0	0	0	0	0	0	17:15	18	0	0	0	0	0	18
5:30	1	0	0	0	0	0	1	17:30	23	0	0	0	0	0	23
5:45	1	0	0	0	0	0	1	17:45	16	0	0	0	0	0	16
6:00	1	0	0	0	0	0	1	18:00	25	0	0	0	0	0	25
6:15	2	0	0	0	0	0	2	18:15	16	0	0	0	0	0	16
6:30	6	0	0	0	0	0	6	18:30	15	0	0	0	0	0	15
6:45	0	0	0	0	0	0	0	18:45	17	1	0	0	0	0	18
7:00	19	1	0	0	0	0	20	19:00	14	0	0	0	0	0	14
7:15	4	0	0	0	0	0	4	19:15	21	0	0	0	0	0	21
7:30	3	0	0	0	0	0	3	19:30	16	0	0	0	0	0	16
7:45	3	0	0	0	0	0	3	19:45	23	0	0	0	0	0	23
8:00	10	0	0	0	0	0	10	20:00	18	0	0	0	0	0	18
8:15	5	0	0	0	0	0	5	20:15	15	0	0	0	0	0	15
8:30	3	0	0	0	0	0	3	20:30	15	0	0	0	0	0	15
8:45	7	0	0	0	0	0	7	20:45	15	0	0	0	0	0	15
9:00	10	0	0	0	0	0	10	21:00	17	0	0	0	0	0	17
9:15	9	1	0	0	0	0	10	21:15	18	0	0	0	0	0	18
9:30	11	0	0	0	0	0	11	21:30	13	0	0	0	0	0	13
9:45	13	0	0	0	0	0	13	21:45	5	0	0	0	0	0	5
10:00	14	2	0	0	0	0	16	22:00	13	0	0	0	0	0	13
10:15	12	1	0	0	0	0	13	22:15	10	0	0	0	0	0	10
10:30	17	1	0	0	0	0	18	22:30	5	0	0	0	0	0	5
10:45	17	0	0	0	0	0	17	22:45	7	0	0	0	0	0	7
11:00	19	0	0	0	0	0	19	23:00	6	0	0	0	0	0	6
11:15	24	1	0	0	0	0	25	23:15	3	0	0	0	0	0	3
11:30	17	0	0	0	0	0	17	23:30	1	0	0	0	0	0	1
11:45	20	0	0	0	0	0	20	23:45	2	0	0	0	0	0	2
TOTAL	260	7	0	0	0	0	267	**TOTAL**	768	7	2	2	1	0	780
				AM PEAK HOUR			11:00 AM							**AM PEAK HOUR**	1:15 PM
				AM PEAK VOLUME			81							**AM PEAK VOLUME**	90

TOTAL: AM+PM	1,028	14	2	2	1	0	1,047
% OF TOTAL	98.2%	1.3%	0.2%	0.2%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY13 Dwy west of Amargosa Rd (south of Main dwy)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	5	0	0	0	0	0	5	12:00	35	0	0	0	0	0	35
0:15	1	0	0	0	0	0	1	12:15	23	0	0	0	0	0	23
0:30	0	0	0	0	0	0	0	12:30	39	0	0	0	0	0	39
0:45	2	0	0	0	0	0	2	12:45	35	0	0	0	0	0	35
1:00	1	0	0	0	0	0	1	13:00	29	2	1	0	0	0	32
1:15	1	0	0	0	0	0	1	13:15	45	2	0	1	0	0	48
1:30	0	0	0	0	0	0	0	13:30	40	0	0	0	0	0	40
1:45	0	0	0	0	0	0	0	13:45	42	1	0	0	0	0	43
2:00	2	0	0	0	0	0	2	14:00	46	0	0	0	0	0	46
2:15	0	0	0	0	0	0	0	14:15	38	2	0	1	1	0	42
2:30	0	0	0	0	0	0	0	14:30	30	1	0	0	0	0	31
2:45	1	0	0	0	0	0	1	14:45	38	1	0	0	0	0	39
3:00	1	0	0	0	0	0	1	15:00	24	0	0	0	0	0	24
3:15	0	0	0	0	0	0	0	15:15	40	0	0	0	0	0	40
3:30	1	0	0	0	0	0	1	15:30	31	0	1	1	0	0	33
3:45	2	0	0	0	0	0	2	15:45	37	1	0	0	0	0	38
4:00	2	0	0	0	0	0	2	16:00	47	0	0	0	0	0	47
4:15	0	0	0	0	0	0	0	16:15	42	0	0	0	0	0	42
4:30	2	0	0	0	0	0	2	16:30	40	1	0	0	0	0	41
4:45	1	0	0	0	0	0	1	16:45	41	0	0	0	0	0	41
5:00	5	0	0	0	0	0	5	17:00	39	0	0	0	0	0	39
5:15	3	0	0	0	0	0	3	17:15	34	0	0	0	0	0	34
5:30	3	0	0	0	0	0	3	17:30	40	1	0	0	0	0	41
5:45	7	0	0	0	0	0	7	17:45	29	0	0	0	0	0	29
6:00	4	0	0	0	0	0	4	18:00	43	0	0	0	0	0	43
6:15	12	0	0	0	0	0	12	18:15	42	0	0	0	0	0	42
6:30	14	0	0	0	0	0	14	18:30	35	0	0	1	0	0	36
6:45	13	3	0	0	0	0	16	18:45	38	1	0	0	0	0	39
7:00	23	2	0	0	0	0	25	19:00	30	0	0	0	0	0	30
7:15	14	0	0	0	0	0	14	19:15	36	0	0	0	0	0	36
7:30	12	0	0	0	0	0	12	19:30	27	0	0	1	0	0	28
7:45	6	0	0	0	0	0	6	19:45	38	0	0	0	0	0	38
8:00	19	0	0	0	0	0	19	20:00	37	0	0	0	0	0	37
8:15	10	0	0	0	0	0	10	20:15	30	0	0	0	0	0	30
8:30	12	0	0	0	0	0	12	20:30	26	0	0	0	0	0	26
8:45	18	0	0	0	0	0	18	20:45	32	0	0	0	0	0	32
9:00	34	0	0	0	0	0	34	21:00	28	1	0	0	0	0	29
9:15	20	1	0	0	0	0	21	21:15	28	0	0	0	0	0	28
9:30	28	0	0	0	0	0	28	21:30	19	0	0	0	0	0	19
9:45	30	1	0	0	0	0	31	21:45	28	0	0	0	0	0	28
10:00	34	2	0	0	0	0	36	22:00	21	0	0	0	0	0	21
10:15	32	1	0	0	0	0	33	22:15	16	0	0	0	0	0	16
10:30	41	1	0	0	0	0	42	22:30	10	0	0	0	0	0	10
10:45	35	0	0	0	0	0	35	22:45	8	0	0	0	0	0	8
11:00	44	0	0	0	0	0	44	23:00	7	0	0	0	0	0	7
11:15	35	1	0	0	0	0	36	23:15	4	0	0	0	0	0	4
11:30	43	0	0	1	0	0	44	23:30	4	0	0	0	0	0	4
11:45	36	0	0	0	0	0	36	23:45	2	0	0	0	0	0	2
TOTAL	609	12	0	1	0	0	622	TOTAL	1,473	14	2	5	1	0	1,495

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	1:15 PM
AM PEAK VOLUME	160	AM PEAK VOLUME	177

TOTAL: AM+PM	2,082	26	2	6	1	0	2,117
% OF TOTAL	98.3%	1.2%	0.1%	0.3%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY14 Dwy west of Amargosa Rd (PV'S Fresh Grill and Tequila)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	6	0	0	0	0	0	6
0:15	1	0	0	0	0	0	1	12:15	18	1	0	0	0	0	19
0:30	3	0	0	0	0	0	3	12:30	12	0	0	0	0	0	12
0:45	0	0	0	0	0	0	0	12:45	20	0	0	0	0	0	20
1:00	0	1	0	0	0	0	1	13:00	10	0	0	0	0	0	10
1:15	0	0	0	0	0	0	0	13:15	7	0	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	13	0	0	0	1	0	14
1:45	1	0	0	0	0	0	1	13:45	15	0	0	0	0	0	15
2:00	0	0	0	0	0	0	0	14:00	9	0	0	0	0	0	9
2:15	0	0	0	0	0	0	0	14:15	13	0	0	0	0	0	13
2:30	0	0	0	0	0	0	0	14:30	11	0	0	0	0	0	11
2:45	0	0	0	0	0	0	0	14:45	14	1	0	0	0	0	15
3:00	0	0	0	0	0	0	0	15:00	8	0	0	0	0	0	8
3:15	0	0	0	0	0	0	0	15:15	13	0	0	0	0	0	13
3:30	1	0	0	0	0	0	1	15:30	12	0	0	0	0	0	12
3:45	3	0	0	0	0	0	3	15:45	15	1	0	0	0	0	16
4:00	1	0	0	0	0	0	1	16:00	19	1	0	0	0	0	20
4:15	1	0	0	0	0	0	1	16:15	10	0	0	0	0	0	10
4:30	0	0	0	0	0	0	0	16:30	16	0	0	0	0	0	16
4:45	3	0	0	0	0	0	3	16:45	20	0	0	0	0	0	20
5:00	2	0	0	0	0	0	2	17:00	19	0	0	0	0	0	19
5:15	0	0	0	0	0	0	0	17:15	18	1	0	0	0	0	19
5:30	1	0	0	0	0	0	1	17:30	11	0	0	0	0	0	11
5:45	1	0	0	0	0	0	1	17:45	19	1	0	0	0	0	20
6:00	3	0	0	0	0	0	3	18:00	16	1	0	0	0	0	17
6:15	0	0	0	0	0	0	0	18:15	9	0	0	0	0	0	9
6:30	1	0	0	0	0	0	1	18:30	19	0	0	0	0	0	19
6:45	8	0	0	0	0	0	8	18:45	12	0	0	0	0	0	12
7:00	4	1	0	0	0	0	5	19:00	8	0	0	0	0	0	8
7:15	6	1	0	0	0	0	7	19:15	19	0	0	0	0	0	19
7:30	4	0	0	0	0	0	4	19:30	14	0	0	0	0	0	14
7:45	7	0	0	0	0	0	7	19:45	6	0	0	0	0	0	6
8:00	3	0	0	1	0	0	4	20:00	16	1	0	0	0	0	17
8:15	9	0	0	0	0	0	9	20:15	17	0	0	0	0	0	17
8:30	6	0	0	0	0	0	6	20:30	6	0	0	1	0	0	7
8:45	6	0	0	0	0	0	6	20:45	11	0	0	0	0	0	11
9:00	9	2	0	0	0	0	11	21:00	7	0	0	0	0	0	7
9:15	8	2	0	1	0	0	11	21:15	5	0	0	0	0	0	5
9:30	9	1	0	0	0	0	10	21:30	5	0	0	0	0	0	5
9:45	11	0	0	0	0	0	11	21:45	6	0	0	0	0	0	6
10:00	10	1	0	0	0	0	11	22:00	6	0	0	0	0	0	6
10:15	5	0	0	0	0	0	5	22:15	5	0	0	0	0	0	5
10:30	7	0	0	0	0	0	7	22:30	6	0	0	0	0	0	6
10:45	12	0	0	0	0	0	12	22:45	2	0	0	0	0	0	2
11:00	15	0	0	0	0	0	15	23:00	2	0	0	0	0	0	2
11:15	9	1	0	1	0	0	11	23:15	1	0	0	1	0	0	2
11:30	13	0	0	0	0	0	13	23:30	1	0	0	0	0	0	1
11:45	11	1	0	0	0	0	12	23:45	0	0	0	0	0	0	0
TOTAL	195	11	0	3	0	0	209	**TOTAL**	527	8	0	2	1	0	538

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	51

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	74

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	722	19	0	5	1	0	747
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	96.7%	2.5%	0.0%	0.7%	0.1%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	1,463	41	3	9	2	0	1,518
CLASS 6	Buses	**% OF TOTAL**	96.4%	2.7%	0.2%	0.6%	0.1%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY14 Dwy west of Amargosa Rd (PV'S Fresh Grill and Tequila)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	4	0	0	0	0	0	4
0:15	3	0	0	0	0	0	3
0:30	10	0	0	0	0	0	10
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	1	1	0	0	0	0	2
1:30	0	0	0	0	0	0	0
1:45	1	0	0	0	0	0	1
2:00	2	0	0	0	0	0	2
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	2	0	0	0	0	0	2
3:00	2	0	0	0	0	0	2
3:15	2	0	0	0	0	0	2
3:30	1	0	0	0	0	0	1
3:45	1	0	0	0	0	0	1
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	1	0	0	0	0	0	1
4:45	0	0	0	0	0	0	0
5:00	1	1	0	0	0	0	2
5:15	2	1	0	0	0	0	3
5:30	4	0	0	0	0	0	4
5:45	0	0	0	0	0	0	0
6:00	4	1	0	0	0	0	5
6:15	0	0	0	0	0	0	0
6:30	2	1	0	0	0	0	3
6:45	4	0	0	0	0	0	4
7:00	5	2	0	0	0	0	7
7:15	4	2	0	0	0	0	6
7:30	5	0	1	0	0	0	6
7:45	3	2	0	0	0	0	5
8:00	7	2	0	1	0	0	10
8:15	5	0	0	0	0	0	5
8:30	4	0	0	0	0	0	4
8:45	9	1	0	0	0	0	10
9:00	6	0	0	0	0	0	6
9:15	7	0	0	0	0	0	7
9:30	6	0	0	0	0	0	6
9:45	6	0	0	0	0	0	6
10:00	14	0	0	0	0	0	14
10:15	4	0	1	0	0	0	5
10:30	11	0	0	0	0	0	11
10:45	11	0	0	1	0	0	12
11:00	5	0	0	0	0	0	5
11:15	12	0	0	0	0	0	12
11:30	7	0	0	0	0	0	7
11:45	17	1	0	0	0	0	18
TOTAL	195	15	2	2	0	0	214

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	42

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	7	0	0	0	0	0	7
12:15	15	0	0	0	0	0	15
12:30	12	0	0	0	0	0	12
12:45	8	1	0	0	0	0	9
13:00	10	0	0	0	0	0	10
13:15	20	0	0	0	0	0	20
13:30	17	1	0	1	0	0	19
13:45	11	0	0	0	0	0	11
14:00	3	0	0	0	0	0	3
14:15	6	0	0	0	0	0	6
14:30	11	0	0	0	0	0	11
14:45	11	0	0	0	0	0	11
15:00	18	0	0	0	0	0	18
15:15	19	0	0	0	0	0	19
15:30	10	0	0	0	0	0	10
15:45	10	0	0	0	0	0	10
16:00	9	0	1	0	0	0	10
16:15	11	0	0	0	0	0	11
16:30	16	0	0	0	0	0	16
16:45	12	1	0	0	0	0	13
17:00	9	0	0	0	1	0	10
17:15	17	0	0	0	0	0	17
17:30	12	1	0	0	0	0	13
17:45	13	2	0	0	0	0	15
18:00	13	0	0	0	0	0	13
18:15	15	0	0	0	0	0	15
18:30	14	0	0	0	0	0	14
18:45	16	0	0	0	0	0	16
19:00	7	0	0	0	0	0	7
19:15	26	0	0	1	0	0	27
19:30	14	0	0	0	0	0	14
19:45	8	1	0	0	0	0	9
20:00	20	0	0	0	0	0	20
20:15	12	0	0	0	0	0	12
20:30	11	0	0	0	0	0	11
20:45	10	0	0	0	0	0	10
21:00	11	0	0	0	0	0	11
21:15	12	0	0	0	0	0	12
21:30	10	0	0	0	0	0	10
21:45	10	0	0	0	0	0	10
22:00	17	0	0	0	0	0	17
22:15	10	0	0	0	0	0	10
22:30	3	0	0	0	0	0	3
22:45	7	0	0	0	0	0	7
23:00	5	0	0	0	0	0	5
23:15	4	0	0	0	0	0	4
23:30	1	0	0	0	0	0	1
23:45	3	0	0	0	0	0	3
TOTAL	546	7	1	2	1	0	557

AM PEAK HOUR	7:15 PM
AM PEAK VOLUME	70

TOTAL: AM+PM		741	22	3	4	1	0	771
% OF TOTAL		96.1%	2.9%	0.4%	0.5%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY14 Dwy west of Amargosa Rd (PV'S Fresh Grill and Tequila)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	5	0	0	0	0	0	5	12:00	13	0	0	0	0	0	13
0:15	4	0	0	0	0	0	4	12:15	33	1	0	0	0	0	34
0:30	13	0	0	0	0	0	13	12:30	24	0	0	0	0	0	24
0:45	0	0	0	0	0	0	0	12:45	28	1	0	0	0	0	29
1:00	0	1	0	0	0	0	1	13:00	20	0	0	0	0	0	20
1:15	1	1	0	0	0	0	2	13:15	27	0	0	0	0	0	27
1:30	0	0	0	0	0	0	0	13:30	30	1	0	1	1	0	33
1:45	2	0	0	0	0	0	2	13:45	26	0	0	0	0	0	26
2:00	2	0	0	0	0	0	2	14:00	12	0	0	0	0	0	12
2:15	0	0	0	0	0	0	0	14:15	19	0	0	0	0	0	19
2:30	0	0	0	0	0	0	0	14:30	22	0	0	0	0	0	22
2:45	2	0	0	0	0	0	2	14:45	25	1	0	0	0	0	26
3:00	2	0	0	0	0	0	2	15:00	26	0	0	0	0	0	26
3:15	2	0	0	0	0	0	2	15:15	32	0	0	0	0	0	32
3:30	2	0	0	0	0	0	2	15:30	22	0	0	0	0	0	22
3:45	4	0	0	0	0	0	4	15:45	25	1	0	0	0	0	26
4:00	1	0	0	0	0	0	1	16:00	28	1	1	0	0	0	30
4:15	1	0	0	0	0	0	1	16:15	21	0	0	0	0	0	21
4:30	1	0	0	0	0	0	1	16:30	32	0	0	0	0	0	32
4:45	3	0	0	0	0	0	3	16:45	32	1	0	0	0	0	33
5:00	3	1	0	0	0	0	4	17:00	28	0	0	0	1	0	29
5:15	2	1	0	0	0	0	3	17:15	35	1	0	0	0	0	36
5:30	5	0	0	0	0	0	5	17:30	23	1	0	0	0	0	24
5:45	1	0	0	0	0	0	1	17:45	32	3	0	0	0	0	35
6:00	7	1	0	0	0	0	8	18:00	29	1	0	0	0	0	30
6:15	0	0	0	0	0	0	0	18:15	24	0	0	0	0	0	24
6:30	3	1	0	0	0	0	4	18:30	33	0	0	0	0	0	33
6:45	12	0	0	0	0	0	12	18:45	28	0	0	0	0	0	28
7:00	9	3	0	0	0	0	12	19:00	15	0	0	0	0	0	15
7:15	10	3	0	0	0	0	13	19:15	45	0	0	1	0	0	46
7:30	9	0	1	0	0	0	10	19:30	28	0	0	0	0	0	28
7:45	10	2	0	0	0	0	12	19:45	14	1	0	0	0	0	15
8:00	10	2	0	2	0	0	14	20:00	36	1	0	0	0	0	37
8:15	14	0	0	0	0	0	14	20:15	29	0	0	0	0	0	29
8:30	10	0	0	0	0	0	10	20:30	17	0	0	1	0	0	18
8:45	15	1	0	0	0	0	16	20:45	21	0	0	0	0	0	21
9:00	15	2	0	0	0	0	17	21:00	18	0	0	0	0	0	18
9:15	15	2	0	1	0	0	18	21:15	17	0	0	0	0	0	17
9:30	15	1	0	0	0	0	16	21:30	15	0	0	0	0	0	15
9:45	17	0	0	0	0	0	17	21:45	16	0	0	0	0	0	16
10:00	24	1	0	0	0	0	25	22:00	23	0	0	0	0	0	23
10:15	9	0	1	0	0	0	10	22:15	15	0	0	0	0	0	15
10:30	18	0	0	0	0	0	18	22:30	9	0	0	0	0	0	9
10:45	23	0	0	1	0	0	24	22:45	9	0	0	0	0	0	9
11:00	20	0	0	0	0	0	20	23:00	7	0	0	0	0	0	7
11:15	21	1	0	1	0	0	23	23:15	5	0	0	1	0	0	6
11:30	20	0	0	0	0	0	20	23:30	2	0	0	0	0	0	2
11:45	28	2	0	0	0	0	30	23:45	3	0	0	0	0	0	3
TOTAL	390	26	2	5	0	0	423	TOTAL	1,073	15	1	4	2	0	1,095

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	93	AM PEAK VOLUME	130

TOTAL: AM+PM	1,463	41	3	9	2	0	1,518
% OF TOTAL	96.4%	2.7%	0.2%	0.6%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY15 Dwy west of Amargosa Rd (Starbucks Coffee)

AM	IN							PM	IN						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	27	0	0	0	0	0	27
0:15	0	0	0	0	0	0	0	12:15	20	0	0	0	0	0	20
0:30	3	0	0	0	0	0	3	12:30	15	1	0	0	0	0	16
0:45	0	0	0	0	0	0	0	12:45	12	1	0	0	0	0	13
1:00	2	0	0	0	0	0	2	13:00	11	1	0	0	0	0	12
1:15	1	0	0	0	0	0	1	13:15	11	0	0	0	0	0	11
1:30	0	0	0	0	0	0	0	13:30	16	0	0	0	0	0	16
1:45	0	0	0	1	0	0	1	13:45	13	0	0	0	0	0	13
2:00	0	0	0	0	0	0	0	14:00	15	0	0	0	0	0	15
2:15	0	0	0	0	0	0	0	14:15	10	0	0	0	0	0	10
2:30	0	0	0	0	0	0	0	14:30	13	1	0	0	0	0	14
2:45	0	0	0	0	0	0	0	14:45	16	0	0	0	0	0	16
3:00	0	0	0	0	0	0	0	15:00	11	1	0	0	0	0	12
3:15	1	0	0	0	0	0	1	15:15	15	0	0	0	0	0	15
3:30	0	0	0	0	0	0	0	15:30	11	0	0	0	0	0	11
3:45	3	0	0	0	0	0	3	15:45	3	0	0	0	0	0	3
4:00	0	0	0	0	0	0	0	16:00	14	0	0	0	0	0	14
4:15	0	0	0	1	0	0	1	16:15	0	0	0	0	0	0	0
4:30	4	0	0	0	0	0	4	16:30	12	0	0	0	0	0	12
4:45	3	0	0	0	0	0	3	16:45	17	0	0	0	0	0	17
5:00	5	0	0	0	0	0	5	17:00	15	0	0	0	0	0	15
5:15	1	0	0	0	0	0	1	17:15	17	0	0	0	0	0	17
5:30	4	0	0	0	0	0	4	17:30	18	0	0	0	0	0	18
5:45	6	0	0	0	0	0	6	17:45	23	0	0	0	0	0	23
6:00	6	0	0	0	0	0	6	18:00	14	0	0	0	0	0	14
6:15	3	0	0	0	0	0	3	18:15	19	0	0	0	0	0	19
6:30	11	1	0	0	0	0	12	18:30	16	0	0	0	0	0	16
6:45	9	0	0	0	0	0	9	18:45	16	1	0	0	0	0	17
7:00	12	0	0	0	0	0	12	19:00	19	0	0	0	0	0	19
7:15	10	0	0	0	0	0	10	19:15	13	0	0	0	0	0	13
7:30	12	0	0	0	0	0	12	19:30	17	0	0	0	0	0	17
7:45	15	1	0	0	0	0	16	19:45	17	0	0	0	0	0	17
8:00	13	0	0	0	0	0	13	20:00	10	0	0	0	0	0	10
8:15	10	0	0	0	0	0	10	20:15	10	0	0	0	0	0	10
8:30	9	0	0	0	0	0	9	20:30	9	0	0	0	0	0	9
8:45	17	1	1	0	0	0	19	20:45	9	0	0	0	0	0	9
9:00	14	0	0	0	0	0	14	21:00	7	0	0	0	0	0	7
9:15	7	0	1	0	0	0	8	21:15	4	0	0	0	0	0	4
9:30	9	1	0	0	0	0	10	21:30	11	0	0	0	0	0	11
9:45	11	0	0	0	0	0	11	21:45	3	0	0	0	0	0	3
10:00	12	0	0	0	0	0	12	22:00	5	0	0	0	0	0	5
10:15	17	0	0	0	0	0	17	22:15	5	0	0	0	0	0	5
10:30	15	0	0	0	0	0	15	22:30	3	0	0	0	0	0	3
10:45	10	4	0	0	0	0	14	22:45	1	0	0	0	0	0	1
11:00	13	1	0	0	0	0	14	23:00	3	0	0	0	0	0	3
11:15	16	1	0	0	0	0	17	23:15	2	0	0	0	0	0	2
11:30	5	0	0	0	0	0	5	23:30	0	0	0	0	0	0	0
11:45	13	0	0	0	0	0	13	23:45	2	0	0	0	0	0	2
TOTAL	303	10	2	2	0	0	317	TOTAL	550	6	0	0	0	0	556

AM PEAK HOUR	10:30 AM	AM PEAK HOUR	12:00 PM
AM PEAK VOLUME	60	AM PEAK VOLUME	76

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	853	16	2	2	0	0	873
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	97.7%	1.8%	0.2%	0.2%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	1,609	34	3	5	0	0	1,651
CLASS 6	Buses	% OF TOTAL	97.5%	2.1%	0.2%	0.3%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY15 Dwy west of Amargosa Rd (Starbucks Coffee)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	7	0	0	0	0	0	7
0:15	0	0	0	0	0	0	0
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	2	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	1	0	0	0	0	0	1
4:45	5	0	0	0	0	0	5
5:00	2	0	0	0	0	0	2
5:15	3	0	0	0	0	0	3
5:30	2	0	0	0	0	0	2
5:45	2	0	0	0	0	0	2
6:00	4	0	0	0	0	0	4
6:15	1	0	0	0	0	0	1
6:30	6	1	0	0	0	0	7
6:45	8	1	0	1	0	0	10
7:00	6	0	0	0	0	0	6
7:15	6	0	0	0	0	0	6
7:30	18	0	0	1	0	0	19
7:45	10	1	0	0	0	0	11
8:00	6	0	0	0	0	0	6
8:15	7	0	0	0	0	0	7
8:30	5	0	0	1	0	0	6
8:45	4	0	0	0	0	0	4
9:00	15	0	0	0	0	0	15
9:15	6	0	1	0	0	0	7
9:30	14	1	0	0	0	0	15
9:45	7	0	0	0	0	0	7
10:00	11	0	0	0	0	0	11
10:15	5	0	0	0	0	0	5
10:30	7	0	0	0	0	0	7
10:45	6	0	0	0	0	0	6
11:00	12	0	0	0	0	0	12
11:15	7	0	0	0	0	0	7
11:30	18	0	0	0	0	0	18
11:45	15	5	0	0	0	0	20
TOTAL	229	9	1	3	0	0	242

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	57

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	9	0	0	0	0	0	9
12:15	22	0	0	0	0	0	22
12:30	10	0	0	0	0	0	10
12:45	15	0	0	0	0	0	15
13:00	15	0	0	0	0	0	15
13:15	16	2	0	0	0	0	18
13:30	13	0	0	0	0	0	13
13:45	20	1	0	0	0	0	21
14:00	11	0	0	0	0	0	11
14:15	14	0	0	0	0	0	14
14:30	13	0	0	0	0	0	13
14:45	9	0	0	0	0	0	9
15:00	10	1	0	0	0	0	11
15:15	8	0	0	0	0	0	8
15:30	12	1	0	0	0	0	13
15:45	10	0	0	0	0	0	10
16:00	7	0	0	0	0	0	7
16:15	0	0	0	0	0	0	0
16:30	10	1	0	0	0	0	11
16:45	16	0	0	0	0	0	16
17:00	12	0	0	0	0	0	12
17:15	14	0	0	0	0	0	14
17:30	19	2	0	0	0	0	21
17:45	13	0	0	0	0	0	13
18:00	16	0	0	0	0	0	16
18:15	15	0	0	0	0	0	15
18:30	15	0	0	0	0	0	15
18:45	19	0	0	0	0	0	19
19:00	16	0	0	0	0	0	16
19:15	3	0	0	0	0	0	3
19:30	13	1	0	0	0	0	14
19:45	13	0	0	0	0	0	13
20:00	14	0	0	0	0	0	14
20:15	18	0	0	0	0	0	18
20:30	16	0	0	0	0	0	16
20:45	10	0	0	0	0	0	10
21:00	8	0	0	0	0	0	8
21:15	12	0	0	0	0	0	12
21:30	5	0	0	0	0	0	5
21:45	9	0	0	0	0	0	9
22:00	6	0	0	0	0	0	6
22:15	3	0	0	0	0	0	3
22:30	3	0	0	0	0	0	3
22:45	6	0	0	0	0	0	6
23:00	4	0	0	0	0	0	4
23:15	2	0	0	0	0	0	2
23:30	2	0	0	0	0	0	2
23:45	1	0	0	0	0	0	1
TOTAL	527	9	0	0	0	0	536

AM PEAK HOUR	1:00 PM
AM PEAK VOLUME	67

TOTAL: AM+PM	756	18	1	3	0	0	778
% OF TOTAL	97.2%	2.3%	0.1%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY15 Dwy west of Amargosa Rd (Starbucks Coffee)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	12:00	36	0	0	0	0	0	36
0:15	0	0	0	0	0	0	0	12:15	42	0	0	0	0	0	42
0:30	4	0	0	0	0	0	4	12:30	25	1	0	0	0	0	26
0:45	0	0	0	0	0	0	0	12:45	27	1	0	0	0	0	28
1:00	4	0	0	0	0	0	4	13:00	26	1	0	0	0	0	27
1:15	1	0	0	0	0	0	1	13:15	27	2	0	0	0	0	29
1:30	0	0	0	0	0	0	0	13:30	29	0	0	0	0	0	29
1:45	0	0	0	1	0	0	1	13:45	33	1	0	0	0	0	34
2:00	0	0	0	0	0	0	0	14:00	26	0	0	0	0	0	26
2:15	0	0	0	0	0	0	0	14:15	24	0	0	0	0	0	24
2:30	0	0	0	0	0	0	0	14:30	26	1	0	0	0	0	27
2:45	0	0	0	0	0	0	0	14:45	25	0	0	0	0	0	25
3:00	0	0	0	0	0	0	0	15:00	21	2	0	0	0	0	23
3:15	1	0	0	0	0	0	1	15:15	23	0	0	0	0	0	23
3:30	0	0	0	0	0	0	0	15:30	23	1	0	0	0	0	24
3:45	3	0	0	0	0	0	3	15:45	13	0	0	0	0	0	13
4:00	0	0	0	0	0	0	0	16:00	21	0	0	0	0	0	21
4:15	0	0	0	1	0	0	1	16:15	0	0	0	0	0	0	0
4:30	5	0	0	0	0	0	5	16:30	22	1	0	0	0	0	23
4:45	8	0	0	0	0	0	8	16:45	33	0	0	0	0	0	33
5:00	7	0	0	0	0	0	7	17:00	27	0	0	0	0	0	27
5:15	4	0	0	0	0	0	4	17:15	31	0	0	0	0	0	31
5:30	6	0	0	0	0	0	6	17:30	37	2	0	0	0	0	39
5:45	8	0	0	0	0	0	8	17:45	36	0	0	0	0	0	36
6:00	10	0	0	0	0	0	10	18:00	30	0	0	0	0	0	30
6:15	4	0	0	0	0	0	4	18:15	34	0	0	0	0	0	34
6:30	17	2	0	0	0	0	19	18:30	31	0	0	0	0	0	31
6:45	17	1	0	1	0	0	19	18:45	35	1	0	0	0	0	36
7:00	18	0	0	0	0	0	18	19:00	35	0	0	0	0	0	35
7:15	16	0	0	0	0	0	16	19:15	16	0	0	0	0	0	16
7:30	30	0	0	1	0	0	31	19:30	30	1	0	0	0	0	31
7:45	25	2	0	0	0	0	27	19:45	30	0	0	0	0	0	30
8:00	19	0	0	0	0	0	19	20:00	24	0	0	0	0	0	24
8:15	17	0	0	0	0	0	17	20:15	28	0	0	0	0	0	28
8:30	14	0	0	1	0	0	15	20:30	25	0	0	0	0	0	25
8:45	21	1	1	0	0	0	23	20:45	19	0	0	0	0	0	19
9:00	29	0	0	0	0	0	29	21:00	15	0	0	0	0	0	15
9:15	13	0	2	0	0	0	15	21:15	16	0	0	0	0	0	16
9:30	23	2	0	0	0	0	25	21:30	16	0	0	0	0	0	16
9:45	18	0	0	0	0	0	18	21:45	12	0	0	0	0	0	12
10:00	23	0	0	0	0	0	23	22:00	11	0	0	0	0	0	11
10:15	22	0	0	0	0	0	22	22:15	8	0	0	0	0	0	8
10:30	22	0	0	0	0	0	22	22:30	6	0	0	0	0	0	6
10:45	16	4	0	0	0	0	20	22:45	7	0	0	0	0	0	7
11:00	25	1	0	0	0	0	26	23:00	7	0	0	0	0	0	7
11:15	23	1	0	0	0	0	24	23:15	4	0	0	0	0	0	4
11:30	23	0	0	0	0	0	23	23:30	2	0	0	0	0	0	2
11:45	28	5	0	0	0	0	33	23:45	3	0	0	0	0	0	3
TOTAL	532	19	3	5	0	0	559	TOTAL	1,077	15	0	0	0	0	1,092

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	106

AM PEAK HOUR	5:30 PM
AM PEAK VOLUME	139

TOTAL: AM+PM	1,609	34	3	5	0	0	1,651
% OF TOTAL	97.5%	2.1%	0.2%	0.3%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY16 Dwy west of Amargosa Rd (The Habit Burger Grill)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	12	0	0	0	0	0	12
0:15	0	0	0	0	0	0	0	12:15	11	1	0	0	0	0	12
0:30	0	0	0	0	0	0	0	12:30	10	0	0	0	0	0	10
0:45	0	0	0	0	0	0	0	12:45	10	0	0	0	0	0	10
1:00	0	0	0	0	0	0	0	13:00	9	2	0	0	0	0	11
1:15	1	0	0	0	0	0	1	13:15	8	0	0	0	0	0	8
1:30	0	0	0	0	0	0	0	13:30	7	0	0	1	0	0	8
1:45	0	0	0	0	0	0	0	13:45	6	0	0	1	0	0	7
2:00	0	0	0	0	0	0	0	14:00	6	0	0	0	0	0	6
2:15	0	0	0	0	0	0	0	14:15	3	0	0	0	0	0	3
2:30	0	0	0	0	0	0	0	14:30	6	1	0	0	0	0	7
2:45	0	0	0	0	0	0	0	14:45	12	0	0	0	0	0	12
3:00	0	0	0	0	0	0	0	15:00	8	1	0	0	0	0	9
3:15	0	2	0	0	0	0	2	15:15	4	0	0	0	1	0	5
3:30	0	0	0	0	0	0	0	15:30	6	0	0	0	0	0	6
3:45	0	0	0	0	0	0	0	15:45	6	0	0	0	0	0	6
4:00	1	0	0	0	0	0	1	16:00	7	0	0	0	0	0	7
4:15	0	0	0	0	0	0	0	16:15	10	0	0	0	0	0	10
4:30	2	0	0	0	0	0	2	16:30	7	0	0	0	0	0	7
4:45	3	0	0	0	0	0	3	16:45	11	0	0	0	0	0	11
5:00	1	0	0	0	0	0	1	17:00	9	0	0	0	0	0	9
5:15	3	0	0	1	0	0	4	17:15	8	0	0	0	0	0	8
5:30	1	0	0	0	0	0	1	17:30	11	0	0	0	0	0	11
5:45	1	0	0	0	0	0	1	17:45	9	0	0	0	0	0	9
6:00	2	0	0	0	0	0	2	18:00	8	0	0	0	0	0	8
6:15	2	0	0	0	0	0	2	18:15	8	0	0	0	0	0	8
6:30	3	0	0	0	0	0	3	18:30	3	0	0	0	0	0	3
6:45	1	0	0	0	0	0	1	18:45	6	0	0	0	0	0	6
7:00	4	0	0	0	0	0	4	19:00	5	0	0	0	0	0	5
7:15	4	0	0	0	0	0	4	19:15	6	0	0	0	0	0	6
7:30	10	0	0	0	0	0	10	19:30	11	0	0	0	0	0	11
7:45	10	0	0	0	0	0	10	19:45	5	0	0	0	0	0	5
8:00	7	0	0	1	0	0	8	20:00	2	0	0	0	0	0	2
8:15	7	1	0	1	0	0	9	20:15	7	0	0	0	0	0	7
8:30	12	0	0	0	0	0	12	20:30	3	0	0	0	0	0	3
8:45	13	1	0	0	0	0	14	20:45	2	0	0	0	0	0	2
9:00	6	0	0	0	0	0	6	21:00	2	0	0	0	0	0	2
9:15	6	0	0	0	0	0	6	21:15	2	0	0	0	0	0	2
9:30	8	0	0	0	0	0	8	21:30	1	0	0	0	0	0	1
9:45	8	0	0	0	0	0	8	21:45	3	0	0	0	0	0	3
10:00	2	0	0	0	0	0	2	22:00	1	0	0	0	0	0	1
10:15	12	0	0	0	0	0	12	22:15	2	0	0	0	0	0	2
10:30	8	0	0	0	0	0	8	22:30	1	0	0	0	0	0	1
10:45	5	1	0	0	0	0	6	22:45	1	0	0	0	0	0	1
11:00	1	0	0	0	0	0	1	23:00	1	0	0	0	0	0	1
11:15	15	0	0	0	0	0	15	23:15	0	0	0	0	0	0	0
11:30	12	1	0	0	0	0	13	23:30	0	0	0	0	0	0	0
11:45	11	1	0	0	0	0	12	23:45	0	0	0	0	0	0	0
TOTAL	182	7	0	3	0	0	192	**TOTAL**	276	5	0	2	1	0	284

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	43

AM PEAK HOUR	12:00 PM
AM PEAK VOLUME	44

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	458	12	0	5	1	0	476
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	96.2%	2.5%	0.0%	1.1%	0.2%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	911	23	3	9	2	0	948
CLASS 6	Buses	**% OF TOTAL**	96.1%	2.4%	0.3%	0.9%	0.2%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY16 Dwy west of Amargosa Rd (The Habit Burger Grill)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1
0:15	1	0	0	0	0	0	1
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0
1:30	2	0	0	0	0	0	2
1:45	2	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	1	0	0	1
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	2	0	0	0	0	2
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	2	0	0	0	0	0	2
5:00	3	0	0	0	0	0	3
5:15	2	0	0	0	0	0	2
5:30	2	0	0	0	0	0	2
5:45	1	0	0	0	0	0	1
6:00	5	0	0	0	0	0	5
6:15	1	0	0	0	0	0	1
6:30	4	0	0	0	0	0	4
6:45	2	0	0	0	0	0	2
7:00	6	0	0	0	0	0	6
7:15	2	0	0	0	0	0	2
7:30	2	0	0	0	0	0	2
7:45	5	0	0	0	0	0	5
8:00	5	0	0	0	0	0	5
8:15	6	0	0	0	0	0	6
8:30	8	0	0	0	0	0	8
8:45	4	0	1	1	0	0	6
9:00	7	0	0	0	0	0	7
9:15	5	1	0	0	0	0	6
9:30	6	0	0	0	0	0	6
9:45	5	0	1	0	0	0	6
10:00	5	0	0	0	0	0	5
10:15	9	0	0	0	0	0	9
10:30	5	0	0	0	0	0	5
10:45	6	1	0	0	0	0	7
11:00	10	0	0	0	0	0	10
11:15	6	0	0	0	0	0	6
11:30	14	0	0	0	0	0	14
11:45	6	1	0	0	0	0	7
TOTAL	152	5	2	2	0	0	161

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	37

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	9	0	0	0	0	0	9
12:15	13	0	0	0	0	0	13
12:30	11	0	0	0	0	0	11
12:45	14	0	0	0	0	0	14
13:00	13	3	0	0	0	0	16
13:15	6	1	0	0	0	0	7
13:30	8	0	0	0	0	0	8
13:45	9	0	0	0	0	0	9
14:00	6	0	0	1	0	0	7
14:15	15	0	0	0	0	0	15
14:30	5	0	0	1	0	0	6
14:45	7	0	0	0	0	0	7
15:00	7	0	0	0	0	0	7
15:15	7	0	0	0	0	0	7
15:30	8	0	1	0	0	0	9
15:45	7	0	0	0	0	0	7
16:00	4	0	0	0	0	0	4
16:15	5	1	0	0	0	0	6
16:30	7	0	0	0	1	0	8
16:45	7	0	0	0	0	0	7
17:00	6	0	0	0	0	0	6
17:15	5	0	0	0	0	0	5
17:30	7	0	0	0	0	0	7
17:45	9	0	0	0	0	0	9
18:00	12	0	0	0	0	0	12
18:15	4	0	0	0	0	0	4
18:30	5	0	0	0	0	0	5
18:45	6	0	0	0	0	0	6
19:00	6	0	0	0	0	0	6
19:15	6	0	0	0	0	0	6
19:30	9	0	0	0	0	0	9
19:45	4	0	0	0	0	0	4
20:00	4	1	0	0	0	0	5
20:15	7	0	0	0	0	0	7
20:30	9	0	0	0	0	0	9
20:45	4	0	0	0	0	0	4
21:00	2	0	0	0	0	0	2
21:15	2	0	0	0	0	0	2
21:30	3	0	0	0	0	0	3
21:45	3	0	0	0	0	0	3
22:00	5	0	0	0	0	0	5
22:15	3	0	0	0	0	0	3
22:30	5	0	0	0	0	0	5
22:45	3	0	0	0	0	0	3
23:00	1	0	0	0	0	0	1
23:15	3	0	0	0	0	0	3
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	301	6	1	2	1	0	311

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	54

TOTAL: AM+PM	453	11	3	4	1	0	472
% OF TOTAL	96.0%	2.3%	0.6%	0.8%	0.2%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY16 Dwy west of Amargosa Rd (The Habit Burger Grill)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1
0:15	1	0	0	0	0	0	1
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	1	0	0	0	0	0	1
1:30	2	0	0	0	0	0	2
1:45	2	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	1	0	0	1
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	2	0	0	0	0	2
3:30	0	2	0	0	0	0	2
3:45	0	0	0	0	0	0	0
4:00	1	0	0	0	0	0	1
4:15	0	0	0	0	0	0	0
4:30	2	0	0	0	0	0	2
4:45	5	0	0	0	0	0	5
5:00	4	0	0	0	0	0	4
5:15	5	0	0	1	0	0	6
5:30	3	0	0	0	0	0	3
5:45	2	0	0	0	0	0	2
6:00	7	0	0	0	0	0	7
6:15	3	0	0	0	0	0	3
6:30	7	0	0	0	0	0	7
6:45	3	0	0	0	0	0	3
7:00	10	0	0	0	0	0	10
7:15	6	0	0	0	0	0	6
7:30	12	0	0	0	0	0	12
7:45	15	0	0	0	0	0	15
8:00	12	0	0	1	0	0	13
8:15	13	1	0	1	0	0	15
8:30	20	0	0	0	0	0	20
8:45	17	1	1	1	0	0	20
9:00	13	0	0	0	0	0	13
9:15	11	1	0	0	0	0	12
9:30	14	0	0	0	0	0	14
9:45	13	0	1	0	0	0	14
10:00	7	0	0	0	0	0	7
10:15	21	0	0	0	0	0	21
10:30	13	0	0	0	0	0	13
10:45	11	2	0	0	0	0	13
11:00	11	0	0	0	0	0	11
11:15	21	0	0	0	0	0	21
11:30	26	1	0	0	0	0	27
11:45	17	2	0	0	0	0	19
TOTAL	334	12	2	5	0	0	353

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	78

PM Time	COMBINED 1	2	3	4	5	6	TOTAL
12:00	21	0	0	0	0	0	21
12:15	24	1	0	0	0	0	25
12:30	21	0	0	0	0	0	21
12:45	24	0	0	0	0	0	24
13:00	22	5	0	0	0	0	27
13:15	14	1	0	0	0	0	15
13:30	15	0	0	1	0	0	16
13:45	15	0	0	1	0	0	16
14:00	12	0	0	1	0	0	13
14:15	18	0	0	0	0	0	18
14:30	11	1	0	1	0	0	13
14:45	19	0	0	0	0	0	19
15:00	15	1	0	0	0	0	16
15:15	11	0	0	0	1	0	12
15:30	14	0	1	0	0	0	15
15:45	13	0	0	0	0	0	13
16:00	11	0	0	0	0	0	11
16:15	15	1	0	0	0	0	16
16:30	14	0	0	0	1	0	15
16:45	18	0	0	0	0	0	18
17:00	15	0	0	0	0	0	15
17:15	13	0	0	0	0	0	13
17:30	18	0	0	0	0	0	18
17:45	18	0	0	0	0	0	18
18:00	20	0	0	0	0	0	20
18:15	12	0	0	0	0	0	12
18:30	8	0	0	0	0	0	8
18:45	12	0	0	0	0	0	12
19:00	11	0	0	0	0	0	11
19:15	12	0	0	0	0	0	12
19:30	20	0	0	0	0	0	20
19:45	9	0	0	0	0	0	9
20:00	6	1	0	0	0	0	7
20:15	14	0	0	0	0	0	14
20:30	12	0	0	0	0	0	12
20:45	6	0	0	0	0	0	6
21:00	4	0	0	0	0	0	4
21:15	4	0	0	0	0	0	4
21:30	4	0	0	0	0	0	4
21:45	6	0	0	0	0	0	6
22:00	6	0	0	0	0	0	6
22:15	5	0	0	0	0	0	5
22:30	6	0	0	0	0	0	6
22:45	4	0	0	0	0	0	4
23:00	2	0	0	0	0	0	2
23:15	3	0	0	0	0	0	3
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	577	11	1	4	2	0	595

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	97

TOTAL: AM+PM	911	23	3	9	2	0	948
% OF TOTAL	96.1%	2.4%	0.3%	0.9%	0.2%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Appendix M – Vehicle Miles Travelled Analysis

TECHNICAL MEMORANDUM

TO: For applicant submittal to the CITY OF HESPERIA

FROM: Bryan Crawford, Giancarlo Ganddini | Ganddini Group, Inc.

DATE: July 8, 2025

SUBJECT: Amargosa and Palmetto High-Cube Warehouse Project
Vehicle Miles Traveled Analysis
GGI Project No. 19522

The purpose of this memorandum is to evaluate the project's vehicle miles traveled (VMT) impact in the context of the California Environmental Quality Act (CEQA) based on the methodology and thresholds established by the City of Hesperia as the Lead Agency. We trust the findings of this analysis will aid the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, California. The currently vacant site is proposed to be developed with a 499,714 square foot high-cube fulfillment center warehouse building. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. The site plan is provided in Attachment A.

PROJECT TRIP GENERATION

For informational purposes, the project trip generation estimate is provided in Attachment B as documented in the *Amargosa and Palmetto High-Cube Warehouse Revised Traffic Impact Analysis* (Ganddini Group, February 28 2025). As shown in Attachment B, the proposed project is forecast to generate 905 daily trips, including 74 trips during the AM peak hour and 77 trips during the PM peak hour. As also shown in Attachment B, the proposed project is forecast to generate 1,083 daily Passenger Car Equivalent (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

VMT BACKGROUND

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

Based on guidance from the OPR Technical Advisory, the City of Hesperia adopted the *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS)* (July 2020) ["TIA Guidelines"], which establishes the City approved methodologies and thresholds.

SCREENING ASSESSMENT

The City TIA Guidelines identify screening criteria for certain types of projects that typically reduce VMT and may be presumed to result in a less than significant VMT impact. To qualify for VMT screening, the project need only satisfy one of the following screening criteria:

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

Based on initial review, the project does not satisfy any of the screening criteria; therefore, further analysis for non-screened development is warranted in accordance with the City's TIA Guidelines.

METHODOLOGY

The following section documents the analytical methodology and thresholds of significance as specified in the City TIA Guidelines.

VMT Assessment for Non-Screened Development

The project-generated VMT and project effect on VMT are calculated using San Bernardino Transportation Analysis Model (SBTAM) for the following scenarios:

- Baseline Conditions: This scenario reflects the existing SBTAM base year model.
- Baseline Plus Project: This scenario reflects the existing SBTAM base year model run with the addition of project socio-economic data (SED) to the project traffic analysis zone (TAZ).
- Cumulative No Project: This scenario reflects the existing SBTAM future year model (2050).
- Cumulative Plus Project: This scenario reflects a new SBTAM future year model run with the addition of project SED to the TAZ.

Thresholds of Significance

Project-Generated VMT

A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

- The baseline project-generated VMT per service population exceeds the San Bernardino County regional average baseline VMT per service population; or
- The cumulative project-generated VMT per service population exceeds the San Bernardino County regional average baseline VMT per service population.

Project Effect on VMT

The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

- The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition; or
- The cumulative link-level boundary (County of San Berardino) VMT per service population increases under the plus project condition compared to the no project condition.

The cumulative no project reflects the adopted Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Accordingly, cumulative impacts shall be considered less than significant if a project is consistent with the RTP/SCS, absent substantial evidence to the contrary.

NEED FOR CUMULATIVE VMT IMPACTS EVALUATION

As specified in the City TIA Guidelines, cumulative impacts shall be considered less than significant if a project is consistent with the RTP/SCS, absent substantial evidence to the contrary.

The project is located within the Southern California Association of Governments (SCAG) Metropolitan Planning Organization (MPO). SCAG is the MPO responsible for development of Connect SoCal 2024, the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the region. Through the local input process, SCAG solicited input from all 197 local jurisdictions, including the City of Hesperia, regarding current land use, socio-economic projections, sustainability and transit measures to develop the Connect SoCal plan and growth projections through the horizon year 2050. The information collected and used in development of the SCAG's long-range plans and environmental goals is documented in Data/Map Books for each jurisdiction.

Based on review of the Data/Map Book for the City of Hesperia, the project site is zoned for commercial retail use per SCAG's land use codes. Since the project proposes a GPA from Regional Commercial (RC) to Com/Ind Business Park (CIBP), evaluation of potential cumulative VMT impacts was determined to be necessary.

PROJECT-GENERATED VMT

In accordance with the City TIA Guidelines, project-generated VMT was calculated using SBTAM+ (version 3.2). The SBTAM model is a trip-based travel demand model developed and maintained by the San Bernardino County Transit Authority (SBCTA). The model analyzes a complex system of inputs such as highway networks, socio-economic data (SED), driver behavior, and goods movement to forecast travel patterns as the region

grows and changes. The SBTAM model covers the entire SCAG region, but the model data is more refined and focused within San Bernardino County as opposed to other areas of the region.

To evaluate project VMT within SBTAM, the project land use must be converted into socio-economic data (SED). Table 1 below shows the project's employment estimate based on employment factors obtained from the Southern California Association of Governments (SCAG) *Employment Density Study Summary Report* (October 31, 2001).

Table 1
Employment Estimates

Employment Density Factors			
Land Use	Employment Density Factor		
Regional Retail	1,009	SF	per Employee
Warehouse	1,195	SF	per Employee

SBTAM SED Inputs		
Land Use	SF[1]	Employees
Proposed Project		
Warehouse	499,714	418
Existing General Plan Buildout Use to be Displaced		
Regional Retail	-499,714	-495
SBTAM Project SED Updates		
Warehousing Employment (Baseline and Cumulative)		+418
Other Retail Employment (Cumulative Only)[2]		-113

Source: SCAG Employment Density Study Summary Report (October 31, 2001)

Notes:
1. SF = Square Feet
2. The SBTAM only assumes 69 retail employees for baseline and 182 retail employees for cumulative SED inputs; therefore, the retail SED displacement was constrained to hold the baseline SED estimates (i.e., the proposed project would result in no additional retail employees compared to baseline).

The project is proposing a General Plan Amendment (GPA) to change the land use from Regional Commercial (RC) to Com/Ind Business Park (CIBP). Based on SCAG's employment density factors, the current General Plan land use of 499,714 square feet of commercial retail would equate to approximately 495 employees; however, the cumulative model only includes 182 retail employees within the project TAZ. Therefore, the number of commercial retail employees that would be displaced in the cumulative model was constrained to 113, thus reflecting no additional retail employees in the project TAZ for year 2050 with project conditions.

The project site is located in TAZ 53908201. The project SED (418 employees) was added to TAZ 53908201. The project-generated VMT was determined as the net change in total VMT for the project TAZ between without and with project model runs. Table 2 shows the daily VMT estimates for the project TAZ.

Table 2
Daily VMT Estimates for Project TAZ

Scenario	Without Project				With Project				Net Change (i.e., Project VMT)			
	VMT	POP	EMP	VMT per SP	VMT	POP	EMP	VMT per SP	VMT	POP	EMP	VMT per SP
Baseline (2019)	38,820	790	117	42.8	69,639	790	535	52.6	30,819	0	418	73.7
Cumulative (2050)	136,709	806	1,230	67.2	148,582	806	1,535	63.5	11,873	0	305	38.9

Source: SBTAM+ (v3.2), Baseline (2019) and Cumulative (2050) models, TAZ 53908201.
Notes:
1. VMT = Vehicle Miled Traveled; POP = Population; EMP = Employment; SP = Service Population (Population + Employment)

As specified in the City's TIA Guidelines, the threshold for project-generated VMT is based on the San Bernardino County regional average baseline VMT per service population. The numeric threshold of 32.7 VMT per service population referred to in the City's TIA Guidelines was calculated based on an earlier version of the SBTAM model that was current at the time of preparation of the guidelines. Since the project VMT was calculated based on the latest SBTAM+ model (version 3.2), an updated numerical threshold was calculated using the latest SBTAM+ model to provide an "apples-to-apples" comparison of the project's impact relative to the Countywide average.

Table 3 shows the Countywide daily VMT estimates for using the latest SBTAM+ model (version 3.2).

Table 3
Countywide Daily VMT Estimates

Scenario	San Bernardino County			
	Total VMT	POP	EMP	VMT per SP
Baseline	117,898,127	2,217,168	859,874	38.3

Source: SBTAM+ (v3.2), baseline (2019) model.
Notes:
1. VMT = Vehicle Miled Traveled; POP = Population; EMP = Employment; SP = Service Population (Population + Employment)

As shown in Table 3, the San Bernardino County regional average baseline is equal to 38.3 VMT per service population.

Table 4 shows the project-generated VMT impact assessment.

Table 4
Project-Generated VMT Impact Assessment

Scenario	Project-Generated VMT Impact Assessment			
	Project VMT per SP[1]	Threshold[2]	Above/Below Threshold (%)	Significant VMT Impact?
2019 (Baseline)	73.7	38.3	+92.4%	Yes
2050 (Cumulative)	38.9	38.3	+1.6%	Yes

Notes:
1. VMT = Vehicle Miled Traveled; SP =Service Population (Population + Employment)
2. Per current SBTAM+ (v3.2).

It is noted that, although the project-generated VMT is estimated to exceed the Countywide average, the proposed project would improve the VMT per service population generated by the TAZ compared to development of the site as a regional retail use per the current General Plan land use designation.

Threshold: A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

- The baseline project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 38.3 VMT per service population; or
- The cumulative project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 38.3 VMT per service population.

Finding: As shown in Table 4, the project-generated VMT is estimated to equal 73.7 VMT per service population for baseline conditions and 38.9 VMT per service population for cumulative conditions, both of which exceed the City-established threshold of 38.3 VMT per service population. Therefore, the project-generated VMT results in a significant impact without mitigation based on the City-established thresholds.

Recommendation

It is recommended that the project implement transportation demand management (TDM) measures to reduce single-occupancy vehicle trips to the extent feasible; however, implementation of such measures are not anticipated to reduce the project's impact to a less than significant level. Guidance from the California Air Pollution Control Officers Association (CAPCOA) *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (December 2021) ["CAPCOA Handbook"] includes information on nine (9) trip reduction program measures that may apply at the project/site level. Guidance from the CAPCOA Handbook states that the maximum reduction possible is 45 percent. It is likely that many of the trip reduction measures identified in the CAPCOA Handbook will not be feasible given the nature of industrial operations. Additionally, even if the maximum VMT reduction of 45 percent is achievable, the project-generated VMT would still exceed the County-established threshold. Other mitigation measures identified in the City's TIA Guidelines, such as modifying the project's built environment or participating in a VMT fee program, are not feasible at the project level or are not currently available. Therefore, the project-generated VMT impact would remain significant and unavoidable.

PROJECT EFFECT ON VMT

The project's effect on VMT was also evaluated using the current SBTAM+ model. Table 5 summarizes the link-level boundary VMT per service population within the County boundary for without and with project conditions.

Table 5
Project Effect VMT Impact Assessment

Scenario	Link-Level VMT Impact Assessment				
	Countywide Link-Level VMT	POP	EMP	Link-Level VMT per SP	Significant Project Effect on VMT?
Baseline (2019) Without Project	67,280,657	2,217,168	859,874	21.9	No
Baseline (2019) With Project	67,242,096	2,217,168	860,292	21.8	
Cumulative (2050) Without Project	94,743,867	2,622,252	1,144,814	25.2	No
Cumulative (2050) With Project	94,734,460	2,622,252	1,145,056	25.1	

Source: SBTAM+ (v3.2), Baseline (2019) and Cumulative (2050) models.

Notes:

1. VMT = Vehicle Miled Traveled; POP = Population; EMP = Employment; SP = Service Population (Population + Employment)

Threshold: The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

- The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition; or
- The cumulative link-level boundary (County of San Berardino) VMT per service population increases under the plus project condition compared to the no project condition.

Finding: As shown in Table 5, the link-level VMT per service population within the County boundary is forecast to decrease from 21.9 to 21.8 VMT per service population for baseline plus project conditions and decrease from 25.2 to 25.1 VMT per service population for cumulative plus project conditions compared to the no project conditions. Therefore, the project effect on VMT is less than significant without mitigation based on the City-established thresholds.

CONCLUSIONS

The project-generated VMT is estimated to equal 73.7 VMT per service population for baseline conditions and 38.9 VMT per service population for cumulative conditions, both of which exceed the City-established threshold of 38.3 VMT per service population. Therefore, the project-generated VMT results in a significant impact without mitigation based on the City-established thresholds.

The link-level VMT per service population within the County boundary is forecast to decrease from 21.9 to 21.8 VMT per service population for baseline plus project conditions and decrease from 25.2 to 25.1 VMT per service population for cumulative plus project conditions compared to the no project conditions. Therefore, the project effect on VMT is less than significant without mitigation based on the City-established thresholds.

It is recommended that the project implement transportation demand management (TDM) measures to reduce single-occupancy vehicle trips to the extent feasible; however, implementation of such measures are not anticipated to reduce the project's impact to a less than significant level. Therefore, the project-generated VMT impact would remain significant and unavoidable.

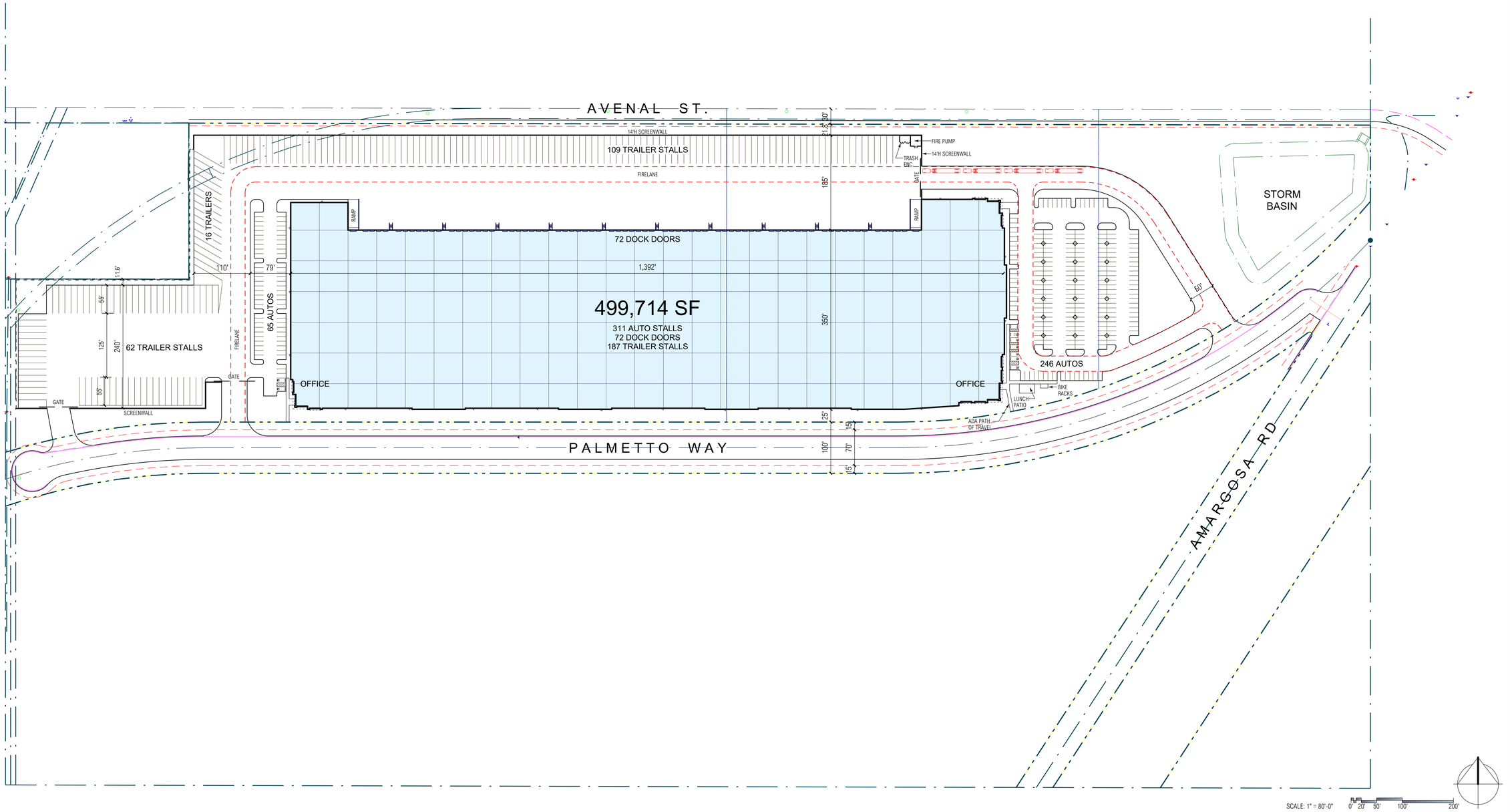
We appreciate the opportunity to assist you with this project. Please contact us at (714) 795-3100 if we can be of further assistance.

ATTACHMENT A

SITE PLAN

PROJECT DATA:

APPROX. NET INDUSTRIAL SITE AREA:	1,329,521 SF / 30.52 AC
BUILDING AREA:	499,714 SF
COVERAGE:	37.6 %
F.A.R.	0.376
AUTO PARKING REQUIRED:	
10,000 SF OFFICE @ 3.33 / 1000 SF	33 STALLS
489,714 SF WAREHOUSE: 20 + 0.4 / 1000 O/ 10K SF	212 STALLS
TOTAL	245 STALLS
PARKING PROVIDED:	
STANDARD STALLS	304 STALLS
ACCESSIBLE STALLS	7 STALLS
TOTAL STALLS PROVIDED	311 STALLS
DOCK LOADING POSITIONS	72 DOCKS
TRAILER PARKING STALLS	171 TRAILERS
LANDSCAPE PROVIDED	00 SF / 00 %



SCALE: 1" = 80'-0"

0' 20' 50' 100' 200'

SPEC. INDUSTRIAL

PALMETTO WAY - HESPERIA, CA

SCHEMATIC SITE PLAN

ATT 2

RGA

Office of Architectural Design

210 Progress, Suite 220
Innovation Park
Irvine, CA 92618

T 949-341-0920
FX 949-341-0922

MARK	DATE	DESCRIPTION
	1/22/25	PLANNING RESUBMITTAL
	12/11/24	SCHEMATIC SET ISSUE

RGA PROJECT NO:	21073.00
CAD FILE NAME:	21073-00-A1-1-P
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SHEET TITLE	

A1-1-P

ATTACHMENT B

PROJECT TRIP GENERATION
EXCERPT FROM TRAFFIC IMPACT ANALYSIS

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.714 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Notice of Preparation (NOP) of a Draft Environmental Impact Report

Appendix M.1 – Revised Vehicle Miles Traveled Analysis

TECHNICAL MEMORANDUM

TO: For applicant submittal to the CITY OF HESPERIA

FROM: Po Leung, Bryan Crawford, Giancarlo Ganddini | Ganddini Group, Inc.

DATE: July 8, 2025 (Revision 1)

SUBJECT: Amargosa and Palmetto High-Cube Warehouse Project
Vehicle Miles Traveled Analysis
GGI Project No. 19522

The purpose of this memorandum is to evaluate the project's vehicle miles traveled (VMT) impact in the context of the California Environmental Quality Act (CEQA) based on the methodology and thresholds established by the City of Hesperia as the Lead Agency. We trust the findings of this analysis will aid the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, California. The currently vacant site is proposed to be developed with a 499,714 square foot high-cube fulfillment center warehouse building. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. The site plan is provided in Attachment A.

PROJECT TRIP GENERATION

For informational purposes, the project trip generation estimate is provided in Attachment B as documented in the *Amargosa and Palmetto High-Cube Warehouse Revised Traffic Impact Analysis* (Ganddini Group, February 28 2025). As shown in Attachment B, the proposed project is forecast to generate 905 daily trips, including 74 trips during the AM peak hour and 77 trips during the PM peak hour. As also shown in Attachment B, the proposed project is forecast to generate 1,083 daily Passenger Car Equivalent (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

VMT BACKGROUND

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

Based on guidance from the OPR Technical Advisory, the City of Hesperia adopted the *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS)* (July 2020) ["TIA Guidelines"], which establishes the City approved methodologies and thresholds.

SCREENING ASSESSMENT

The City TIA Guidelines identify screening criteria for certain types of projects that typically reduce VMT and may be presumed to result in a less than significant VMT impact. To qualify for VMT screening, the project need only satisfy one of the following screening criteria:

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

Based on initial review, the project does not satisfy any of the screening criteria; therefore, further analysis for non-screened development is warranted in accordance with the City's TIA Guidelines.

METHODOLOGY

The following section documents the analytical methodology and thresholds of significance as specified in the City TIA Guidelines.

VMT Assessment for Non-Screened Development

The project-generated VMT and project effect on VMT are calculated using San Bernardino Transportation Analysis Model (SBTAM) for the following scenarios:

- Baseline Conditions: This scenario reflects the existing SBTAM base year model.
- Baseline Plus Project: This scenario reflects the existing SBTAM base year model run with the addition of project socio-economic data (SED) to the project traffic analysis zone (TAZ).
- Cumulative No Project: This scenario reflects the existing SBTAM future year model (2050).
- Cumulative Plus Project: This scenario reflects a new SBTAM future year model run with the addition of project SED to the TAZ.

Thresholds of Significance

Project-Generated VMT

A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

- The baseline project-generated VMT per service population exceeds the San Bernardino County regional average baseline VMT per service population; or
- The cumulative project-generated VMT per service population exceeds the San Bernardino County regional average baseline VMT per service population.

Project Effect on VMT

The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

- The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition; or
- The cumulative link-level boundary (County of San Berardino) VMT per service population increases under the plus project condition compared to the no project condition.

The cumulative no project reflects the adopted Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Accordingly, cumulative impacts shall be considered less than significant if a project is consistent with the RTP/SCS, absent substantial evidence to the contrary.

NEED FOR CUMULATIVE VMT IMPACTS EVALUATION

As specified in the City TIA Guidelines, cumulative impacts shall be considered less than significant if a project is consistent with the RTP/SCS, absent substantial evidence to the contrary.

The project is located within the Southern California Association of Governments (SCAG) Metropolitan Planning Organization (MPO). SCAG is the MPO responsible for development of Connect SoCal 2024, the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the region. Through the local input process, SCAG solicited input from all 197 local jurisdictions, including the City of Hesperia, regarding current land use, socio-economic projections, sustainability and transit measures to develop the Connect SoCal plan and growth projections through the horizon year 2050. The information collected and used in development of the SCAG's long-range plans and environmental goals is documented in Data/Map Books for each jurisdiction.

Based on review of the Data/Map Book for the City of Hesperia, the project site is zoned for commercial retail use per SCAG's land use codes. Since the project proposes a GPA from Regional Commercial (RC) to Com/Ind Business Park (CIBP), evaluation of potential cumulative VMT impacts was determined to be necessary.

PROJECT-GENERATED VMT

In accordance with the City TIA Guidelines, project-generated VMT was calculated using SBTAM+ (version 3.2). The SBTAM model is a trip-based travel demand model developed and maintained by the San Bernardino County Transit Authority (SBCTA). The model analyzes a complex system of inputs such as highway networks, socio-economic data (SED), driver behavior, and goods movement to forecast travel patterns as the region

grows and changes. The SBTAM model covers the entire SCAG region, but the model data is more refined and focused within San Bernardino County as opposed to other areas of the region.

To evaluate project VMT within SBTAM, the project land use must be converted into socio-economic data (SED). Table 1 below shows the project's employment estimate based on employment factors obtained from the Southern California Association of Governments (SCAG) *Employment Density Study Summary Report* (October 31, 2001).

Table 1
Employment Estimates

Employment Density Factors	
Land Use	Employment Density Factor
Warehouse	1,195 SF per Employee

SBTAM SED Inputs		
Land Use	SF[1]	Employees
Proposed Project		
Warehouse	499,714	418

Source: SCAG Employment Density Study Summary Report (October 31, 2001)

Notes:
1. SF = Square Feet

To isolate project-generated VMT, the existing SED data within the project site's TAZ 53908201 was moved to a neighboring TAZ 53918203 with existing residential and employment-based land uses (TAZ 53918203). Based on the employment density factors shown in Table 1, the project SED (418 employees) was added to the project TAZ 53908201. Table 2 shows the daily VMT estimates for the project TAZ.

Table 2
Daily VMT Estimates for Project TAZ

Scenario	TAZ 53908201		
	VMT	EMP	VMT per SP
2019	19,944	418	47.7
2050	34,632	418	82.9

Source: SBTAM+, Baseline (2019) and Cumulative (2050) models.

As specified in the City's TIA Guidelines, the threshold for project-generated VMT is based on the San Bernardino County regional average baseline VMT per service population. The numeric threshold of 32.7 VMT per service population referred to in the City's TIA Guidelines was calculated based on an earlier version of the SBTAM model that was current at the time of preparation of the guidelines. Since the project VMT was calculated based on the latest SBTAM+ model (version 3.2), an updated numerical threshold was calculated using the latest SBTAM+ model to provide an "apples-to-apples" comparison of the project's impact relative to the Countywide average.

Table 3 shows the Countywide daily VMT estimates for using the latest SBTAM+ model (version 3.2).

Table 3
Countywide Daily VMT Estimates

Scenario	San Bernardino County			
	Total VMT	POP	EMP	VMT per SP
Baseline	117,898,127	2,217,168	859,874	38.3

Source: SBTAM+ (v3.2), baseline (2019) model.
Notes:
1. VMT = Vehicle Miled Traveled; POP = Population; EMP = Employment; SP = Service Population (Population + Employment)

As shown in Table 3, the San Bernardino County regional average baseline is equal to 38.3 VMT per service population.

Table 4 shows the project-generated VMT impact assessment.

Table 4
Project-Generated VMT Impact Assessment

Scenario	Project-Generated VMT Impact Assessment			
	Project VMT per SP[1]	Threshold[2]	Above/Below Threshold (%)	Significant VMT Impact?
2019 (Baseline)	47.7	38.3	+24.5%	Yes
2050 (Cumulative)	82.9	38.3	+116.4%	Yes

Notes:
1. VMT = Vehicle Miled Traveled; SP = Service Population (Population + Employment)
2. Per current SBTAM+ (v3.2).

Threshold: A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

- The baseline project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 38.3 VMT per service population; or
- The cumulative project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 38.3 VMT per service population.

Finding: As shown in Table 4, the project-generated VMT is estimated to equal 47.7 VMT per service population for baseline conditions and 82.9 VMT per service population for cumulative conditions, both of which exceed the City-established threshold of 38.3 VMT per service population. Therefore, the project-generated VMT results in a significant impact without mitigation based on the City-established thresholds.

Project-Generated VMT Mitigation

As outlined in the City TIA Guidelines, the following choices are available to mitigate VMT impacts:

1. Modify the project's-built environment characteristics to reduce VMT generated by the project.
2. Implement Transportation Demand Management (TDM) measures to reduce VMT generated by the project.
3. Participate in a VMT fee program and/or VMT mitigation exchange/banking program (if they exist) to reduce VMT from the project or other land uses to achieve acceptable levels.

As of May 2025, the San Bernardino County Transportation Authority (SBCTA) is developing a pilot VMT Mitigation Bank; however, the program is not formally in effect and this form of mitigation is therefore infeasible. Attachment B of the City TIA Guidelines outline seven (7) measures deemed appropriate for most of the San Bernardino region/City of Hesperia based on the SBCTA Implementation Study. These measures are generally based on 2010 research from the California Air Pollution Control Officers Association (CAPCOA). The updated CAPCOA *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (2024) ["CAPCOA Handbook"] outlines a total of 39 measures aimed at reducing transportation-related greenhouse gas emissions (GHG), many of which include VMT reduction as a co-benefit. Like the findings of the SBCTA Implementation Study, few of these measures, if any, are applicable to development projects in the San Bernardino and City of Hesperia. Attachment C contains a detailed review of each measure and its relevance to the proposed project.

As outlined in Attachment C, no measures could be identified that would result in any appreciable level of VMT reduction. The primary constraints include the nature of the proposed warehousing use, which limits the ability to provide a mix of on-site land uses, and limited infrastructure for alternative modes of transportation in the project vicinity. Therefore, the project-generated VMT impact would remain significant and unavoidable.

PROJECT EFFECT ON VMT

The project's effect on VMT was also evaluated using the current SBTAM+ model. Table 3 summarizes the link-level boundary VMT per service population within the County boundary for without and with project conditions.

Table 5
Project Effect VMT Impact Assessment

Scenario	Link-Level VMT Impact Assessment				
	Countywide Link-Level VMT	POP	EMP	Link-Level VMT per SP	Significant Project Effect on VMT?
Baseline (2019) Without Project	67,280,657	2,217,168	859,874	21.9	No
Baseline (2019) With Project	67,311,167	2,217,168	860,292	21.9	
Cumulative (2050) Without Project	94,743,867	2,622,252	1,144,751	25.2	No
Cumulative (2050) With Project	94,754,786	2,622,252	1,145,169	25.2	

Source: SBTAM+ (v3.2), Baseline (2019) and Cumulative (2050) models.

Notes:

1. VMT = Vehicle Miled Traveled; POP = Population; EMP = Employment; SP = Service Population (Population + Employment)
2. All SED in the Project TAZ (53908201) from the Cumulative Without Project was moved to a neighboring zone for Cumulative With Project conditions. Therefore, since the portion of retail growth within the Project TAZ that would be displaced by the proposed project is still included, Cumulative With Project link-level VMT is overestimated, resulting in a conservative analysis.

Threshold: The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

- The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition; or
- The cumulative link-level boundary (County of San Berardino) VMT per service population increases under the plus project condition compared to the no project condition.

Finding: As shown in Table 5, the link-level VMT per service population within the County boundary is forecast to remain at 21.9 VMT per service population for baseline plus project conditions and 25.2 VMT per service population for cumulative plus project conditions compared to the no project conditions. Therefore, the project effect on VMT is less than significant without mitigation based on the City-established thresholds.

CONCLUSIONS

The project-generated VMT is estimated to equal 47.7 VMT per service population for baseline conditions and 82.9 VMT per service population for cumulative conditions, both of which exceed the City-established threshold of 38.3 VMT per service population. Therefore, the project-generated VMT results in a significant impact without mitigation based on the City-established thresholds. No measures could be identified that would result in any appreciable level of VMT reduction. The primary constraints include the nature of the proposed warehousing use, which limits the ability to provide a mix of on-site land uses, and limited infrastructure for alternative modes of transportation in the project vicinity. Therefore, the project-generated VMT impact would remain significant and unavoidable.

The link-level VMT per service population within the County boundary is forecast to remain at 21.9 VMT per service population for baseline plus project conditions and 25.2 VMT per service population for cumulative plus project conditions compared to the no project conditions. Therefore, the project effect on VMT is less than significant without mitigation based on the City-established thresholds.

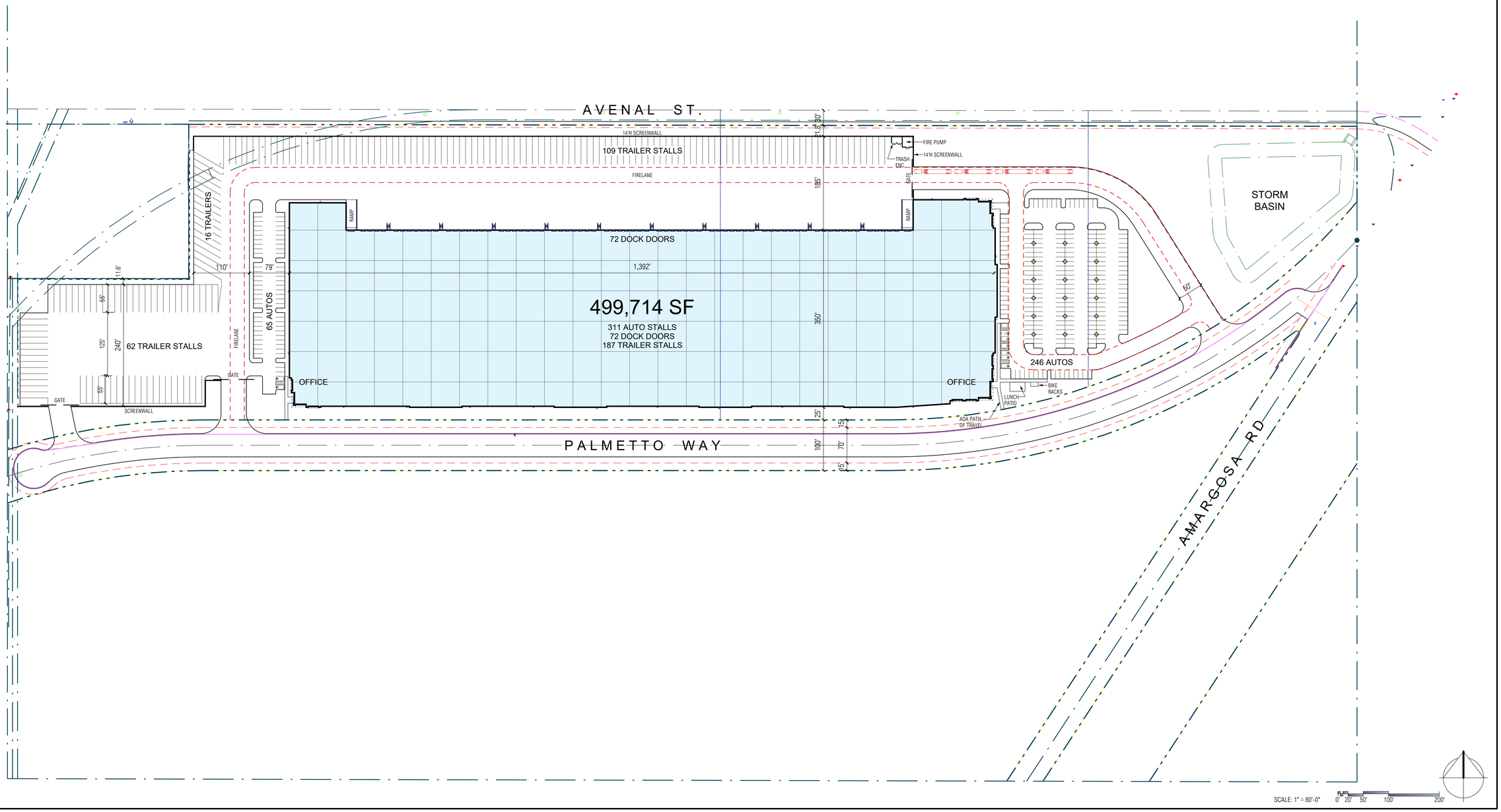
We appreciate the opportunity to assist you with this project. Please contact us at (714) 795-3100 if we can be of further assistance.

ATTACHMENT A

SITE PLAN

PROJECT DATA:

APPROX. NET INDUSTRIAL SITE AREA:	1,329,521 SF / 30.52 AC
BUILDING AREA:	499,714 SF
COVERAGE:	37.6 %
F.A.R.	0.376
AUTO PARKING REQUIRED:	
10,000 SF OFFICE @ 3.33 / 1000 SF	33 STALLS
489,714 SF WAREHOUSE: 20 + 0.4 / 1000 O/ 10K SF	212 STALLS
TOTAL	245 STALLS
PARKING PROVIDED:	
STANDARD STALLS	304 STALLS
ACCESSIBLE STALLS	7 STALLS
TOTAL STALLS PROVIDED	311 STALLS
DOCK LOADING POSITIONS	72 DOCKS
TRAILER PARKING STALLS	171 TRAILERS
LANDSCAPE PROVIDED	00 SF / 00 %



RGA

Office of Architectural Design

210 Progress, Suite 220
Innovation Park
Irvine, CA 92618

T 949-341-0920
FX 949-341-0922

SPEC. INDUSTRIAL

PALMETTO WAY - HESPERIA, CA

SCHEMATIC SITE PLAN

MARK	DATE	DESCRIPTION
	1/22/25	PLANNING RESUBMITTAL
	12/11/24	SCHEMATIC SET ISSUE

RGA PROJECT NO:	21073.00
CAD FILE NAME:	21073-00-A1-1-P
DRAWN BY:	CS
CHK'D BY:	CS
COPYRIGHT: RGA, OFFICE OF ARCHITECTURAL DESIGN	
SHEET TITLE	

A1-1-P

ATTACHMENT B

PROJECT TRIP GENERATION
EXCERPT FROM TRAFFIC IMPACT ANALYSIS

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.714 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

ATTACHMENT C

FEASIBILITY ASSESSMENT OF POTENTIAL VMT REDUCTION MEASURES

Table C1 (1 of 3)
Feasibility Assessment of Potential VMT Mitigation Measures

Measure[1]	Scale of Application	Maximum Potential VMT Reduction	Feasible for Project/ Regional Context?	Assessment
LAND USE				
T-1 Increase Residential Density	Project/Site	30.00%	No	The project seeks to maximize use of the site for the proposed warehousing use. Due to the nature of warehousing operations, it is not feasible to add residential uses to the project.
T-2 Increase Job Density	Project/Site	30.00%	No	The proposed project would increase job density; however, the additional jobs created by the project is already accounted for in the VMT results calculated from the travel demand model. It is not appropriate to apply the CAPCOA formula for GHG reduction to the calculated VMT results.
T-3 Provide Transit-Oriented Development	Project/Site	31.00%	No	The project site is not located near an existing or planned transit station or high-quality transit corridor.
T-4 Integrate Affordable and Below Market Rate Housing	Project/Site	28.60%	No	The project seeks to maximize use of the site for the proposed warehousing use. Due to the nature of warehousing operations, it is not feasible to add residential uses to the project.
T-17 Improve Street Connectivity	Plan/Community	30.00%	No	Not applicable at the project/site level.
T-55 Infill Development	Project/Site	30.00%	No	Not feasible due to regional context or proposed use. This measure only applies to infill housing developments that allow residents to live closer to downtown areas.
TRIP REDUCTION PROGRAMS[2]				
T-5 Implement Commute Trip Reduction Program (Voluntary)	Project/Site	4.00%	No	Potential VMT reduction associated with this measure would only apply to the employee commute portion of the total VMT calculated for the project. This measure would implement a voluntary commute trip reduction program comprised of the elements described in Measures T-7 through T-11; however, there are no existing transit stops within reasonable walking distance of the project site and no existing bicycle facilities in the project vicinity. Given the lack of access to alternative transportation modes, this measure is not expected to achieve any appreciable level of VMT reduction.
T-6 Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)	Project/Site	26.00%	No	Potential VMT reduction associated with this measure would only apply to the employee commute portion of the total VMT calculated for the project. This measure would include all other elements described for Measure T-5 plus mandatory trip reduction requirements, plus regular monitoring/reporting and penalties for non-compliance to ensure the calculated VMT reduction matches the observed VMT reduction. There are no existing transit stops within reasonable walking distance of the project site and no existing bicycle facilities in the project vicinity. Given the lack of access to alternative transportation modes, this measure is not expected to achieve any appreciable level of VMT reduction.
T-7 Implement Commute Trip Reduction Marketing	Project/Site	4.00%	No	This measure would be incorporated into Measure T-5.
T-8 Provide Ridesharing Program	Project/Site	8.00%	No	This measure would be incorporated into Measure T-5.
T-9 Implement Subsidized or Discounted Transit Program	Project/Site	5.50%	No	This measure would be incorporated into Measure T-5.

Table C1 (2 of 3)
Feasibility Assessment of Potential VMT Mitigation Measures

Measure[1]	Scale of Application	Maximum Potential VMT Reduction	Feasible for Project/ Regional Context?	Assessment
T-10 Provide End-of-Trip Bicycle Facilities	Project/Site	4.40%	No	This measure would be incorporated into Measure T-5.
T-11 Provide Employer-Sponsored Vanpool	Project/Site	20.40%	No	This measure would be incorporated into Measure T-5.
T-12 Price Workplace Parking	Project/Site	20.00%	No	This measure requires access to alternative modes of transportation to effectively reduce VMT. There are no existing transit stops within reasonable walking distance of the project site and no existing bicycle facilities in the project vicinity. Given the lack of access to alternative transportation modes, this measure is not feasible.
T-13 Implement Employee Parking Cash-Out	Project/Site	12.00%	No	This measure requires access to alternative modes of transportation to effectively reduce VMT. There are no existing transit stops within reasonable walking distance of the project site and no existing bicycle facilities in the project vicinity. Given the lack of access to alternative transportation modes, this measure is not feasible.
T-23 Provide Community-Based Travel Planning	Plan/Community	2.30%	No	Not applicable at the project/site level.
PARKING OR ROAD PRICING MANAGEMENT				
T-14 Provide Electric Vehicle Charging Infrastructure	Project/Site	-	No	Only reduces GHG emissions; no VMT reduction co-benefit.
T-15 Limit Residential Parking Supply	Project/Site	13.70%	No	The project does not include residential uses.
T-16 Unbundle Residential Parking Costs from Property Cost	Project/Site	15.70%	No	The project does not include residential uses.
T-24 Implement Market Price Public Parking (On-Street)	Plan/Community	30.00%	No	Not applicable at the project/site level.
NEIGHBORHOOD DESIGN				
T-18 Provide Pedestrian Network Improvement	Plan/Community	6.40%	No	Not applicable at the project/site level.
T-19A Construct or Improve Bike Facility	Plan/Community	0.80%	No	Not applicable at the project/site level.
T-19B Construct or Improve Bike Boulevard	Plan/Community	0.20%	No	Not applicable at the project/site level.
T-20 Extend Bikeway Network	Plan/Community	0.50%	No	Not applicable at the project/site level.
T-21A Implement Conventional Carshare Program	Plan/Community	0.15%	No	Not applicable at the project/site level.
T-21B Implement Electric Carshare Program	Plan/Community	0.18%	No	Not applicable at the project/site level.
T-22A Implement Pedal (Non-Electric) Bikeshare Program	Plan/Community	0.02%	No	Not applicable at the project/site level.
T-22B Implement Electric Bikeshare Program	Plan/Community	0.06%	No	Not applicable at the project/site level.
T-22C Implement Scootershare Program	Plan/Community	0.07%	No	Not applicable at the project/site level.

Table C1 (3 of 3)
Feasibility Assessment of Potential VMT Mitigation Measures

Measure[1]	Scale of Application	Maximum Potential VMT Reduction	Feasible for Project/ Regional Context?	Assessment
T-22D Transition Conventional to Electric Bikeshare	Plan/Community	0.06%	No	Not applicable at the project/site level.
TRANSIT				
T-25 Extend Transit Network Coverage or Hours	Plan/Community	4.60%	No	Not applicable at the project/site level.
T-26 Increase Transit Service Frequency	Plan/Community	11.30%	No	Not applicable at the project/site level.
T-27 Implement Transit-Supportive Roadway Treatments	Plan/Community	0.60%	No	Not applicable at the project/site level.
T-28 Provide Bus Rapid Transit	Plan/Community	13.80%	No	Not applicable at the project/site level.
T-29 Reduce Transit Fares	Plan/Community	1.20%	No	Not applicable at the project/site level.
T-46 Provide Transit Shelters	Plan/Community	0.32%	No	Not applicable at the project/site level.
CLEAN VEHICLES AND FUELS				
T-30 Use Cleaner-Fuel Vehicles	All	-	No	Only reduces GHG emissions; no VMT reduction co-benefit.
SCHOOL PROGRAMS				
T-40 Establish a School Bus Program	Project/Site	57.00%	No	This measure is only applicable for school/educational land uses.
T-56 Active Modes of Transportation for Youth	Project/Site	22.20%	No	This measure is only applicable for school/educational land uses.

Notes:
1. Source: *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*. California Air Pollution Control Officers Association (CAPCOA), October 2024.

2. Measures and associated VMT reduction applies to commute VMT only.

Appendix N – NOP ISMND Comments

City of Hesperia

Gateway to the High Desert

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Date: September 16, 2025

To: State Agencies, Responsible Agencies, Local and Public Agencies, and Interested Parties

From/Lead Agency: City of Hesperia, Planning Department

Subject: **Notice of Preparation of an Environmental Impact Report for the Amargosa Road and Palmetto Way Industrial Warehouse Building**

This Notice of Preparation (NOP) has been prepared to notify agencies and interested parties that the City of Hesperia (City), as lead agency, is commencing the preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) to evaluate the potential environmental effects associated with implementation of the Amargosa Road and Palmetto Way Industrial Warehouse Building Project (Project).

The City is requesting input from interested individuals, organizations, and agencies regarding the scope and content of the environmental analysis to be included in the EIR. In accordance with CEQA, the City requests that agencies provide comments on the environmental issues related to the statutory responsibilities of their particular agency. This NOP contains a description of the Project, its location, and a preliminary determination of the environmental resource topics to be addressed in the EIR.

Project Location

The approximately 30.52-acre Project site is located in the southwestern portion of the City of Hesperia, within the Victor Valley region of San Bernardino County. The site consists of three parcels (APNs: 0405-072-52, 53, and 55) and is currently vacant, with level terrain and a mix of disturbed vegetation and Joshua tree woodland. The site is bounded by Avenal Street to the north, Palmetto Way to the south, and Amargosa Road to the east, with regional access provided by Interstate 15.

Project Summary

Rachamin 5, LLC ("Applicant") proposes to construct a 499,714-square-foot industrial warehouse and distribution center on approximately 30.52 acres in the City of Hesperia. The facility would include approximately 10,000 square feet of office space and 489,714 square feet of warehouse/distribution space, along with 72 loading docks, 256 tractor-trailer stalls, 251 passenger vehicle parking spaces, stormwater facilities, sidewalks, and landscaping. The Project site consists of three parcels (APNs: 0405-072-52, 53, and 55) located south of Avenal Street, north of Palmetto Way, and west of Amargosa Road.

Allison Lee, Mayor
Cameron Gregg, Mayor Pro Tem
Brigit Bennington, Council Member
Josh Pullen, Council Member
Chris Ochoa, Council Member

Rachel Molina, City Manager

9700 Seventh Avenue
Hesperia, CA 92345

760-947-1000
TD 760-947-1119

www.cityofhesperia.us

To implement the Project, the Applicant would need to obtain, at a minimum, the following discretionary permits/approvals:

- Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP).
- Conditional Use Permit to permit the construction and operation of a warehousing and distribution center of a size greater than 200,000 square feet in the Commercial/Industrial Business Park zone.
- Development Code Amendment to designate Amargosa Road as a new truck route from Avenal Street to Main Street in compliance with AB 98.
- Certification of the Final Environmental Impact Report.
- Incidental Take Permit from California Department of Fish and Wildlife (CDFW) for removal of Western Johsua Tree.

Potential Environmental Impacts of the Project

As discussed in the attached Initial Study, the EIR will evaluate whether implementation of the Project may potentially result in one or more significant environmental impacts. The potential environmental effects to be addressed in the EIR will include but may not be limited to the following:

- Greenhouse Gas Emissions
- Transportation/Traffic

The EIR will also address all other CEQA-mandated topics, including cumulative impacts and alternatives.

Public Scoping Comment Period

The City has established a 30-day public scoping period from September 16, 2025, to October 16, 2025. During the scoping period, the City's intent is to disseminate Project information to the public and solicit comments from agencies, organizations, and interested parties, including nearby residents and business owners, regarding the scope and content of the environmental information to be included in the EIR, including mitigation measures or Project alternatives to reduce potential environmental effects.

During this period, this NOP and the attached Initial Study may be accessed electronically at the following website: https://www.hesperiaca.gov/1466/Environmental-Review-Documents

This NOP and the attached Initial Study are also available for review in person at Hesperia City Hall, Planning Department, 9700 Seventh Avenue, Hesperia, California 9234. All comments must be received in writing by October 16, by 5:00 p.m., which is the end of the 30-day public scoping period. All written comments should indicate an associated contact person for the agency or organization, if applicable, and reference the Project name in the subject line. Pursuant to CEQA, responsible agencies are requested to indicate their statutory responsibilities in connection with the Project when responding. Please mail or email comments and direct any questions to the following contact person:

Edgar Gonzalez, Senior Planner
City of Hesperia Planning Department
9700 Seventh Avenue
Hesperia, California 92345
Phone: (760) 947-1330
Email: egonzalez@hesperiaca.gov

Amargosa Road and Palmetto Way
Industrial Warehouse Building Initial Study

Initial Study

Amargosa Road and Palmetto Way Industrial Warehouse Building

Hesperia, California

Lead Agency:

City of Hesperia
9700 Seventh Avenue
Hesperia, CA 92345

Prepared By:

Casc Engineering and Consulting, Inc.
1470 E. Cooley Dr.
Colton, CA 92324
(909) 783-0101 Ext. 5370

September 2025

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APPENDICIES

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Appendix B - Amargosa and Palmetto High-Cube Warehouse Mobile Source Health Risk Assessment City of Hesperia. Urban Crossroads, Inc. February 1, 2023.

Appendix C - Amargosa Road & Palmetto Way Spec. Industrial Project Biological Resources Assessment Report. Casc Engineering and Consulting, Inc. October 2022.

Appendix D - Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project, City of Hesperia, San Bernardino County, California. Duke Cultural Resources Management, LLC. September 23, 2022.

Appendix E - Amargosa and Palmetto High-Cube Warehouse Energy Analysis City of Hesperia. Urban Crossroads, Inc. February 1, 2023.

Appendix F - Geotechnical Investigation Proposed Warehouse NWC Palmetto Way and Amargosa Road Hesperia, California. Southern California Geotechnical, Inc. July 18, 2022.

Appendix G - Amargosa and Palmetto High-Cube Warehouse Greenhouse Gas Analysis City of Hesperia. Urban Crossroads, Inc. February 1, 2023.

Appendix H - Hesperia Spec. Industrial, Industrial Buildings City of Hesperia, CA Preliminary Hydrology Report. WestLAND Group, Inc. July 2022.

Appendix I - Conceptual Water Quality Management Plan for Hesperia Spec Industrial. WestLAND Group, Inc. July 13, 2022.

Appendix J - Amargosa and Palmetto High-Cube Warehouse Noise Impact and Vibration Analysis City of Hesperia. Urban Crossroads, Inc. January 27, 2023.

Appendix K - Amargosa and Palmetto High-Cube Warehouse Revised Traffic Impact Analysis City of Hesperia. Ganddini Group, Inc. August 21, 2025.

Appendix L - Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis. Ganddini Group, Inc. September 6, 2023.

Appendix M - Amargosa and Palmetto High-Cube Warehouse Project Vehicle Miles Traveled Analysis, Ganddini Group, Inc. July 8, 2025.

CHAPTER ONE – INTRODUCTION

1.1 Purpose and Authority

Pursuant to Section 15367 of the State CEQA Guidelines, the City of Hesperia ("City") is the lead agency for the Project. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project.

As set forth in the State CEQA Guidelines Section 15070, an IS/MND can be prepared when the Initial Study has identified potentially significant environmental impacts, but revisions have been made to a project, prior to public review of the Initial Study, that would avoid or mitigate the impacts to a level considered less than significant; and there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

The environmental documentation, which is ultimately selected by the City in accordance with CEQA, is intended as an informational document undertaken to provide an environmental basis for subsequent discretionary actions upon the project. The resulting documentation is not, however, a policy document and its approval and/or certification neither presupposes nor mandates any actions on the part of those agencies from whom permits and/or other discretionary approvals would be required.

The environmental documentation is subject to a public review period of 30 days. During this review, public agency comments related to environmental issues should be addressed to the City. The City will consider the comments received as a part of the Project's environmental review and will include them as part of the Initial Study/Mitigated Negative Declaration documentation for adoption.

1.2 Documents Incorporated by Reference

As permitted by Section 15150 of the CEQA Guidelines, this IS/MND references several technical studies and analyses. Information from the documents incorporated by reference is briefly summarized in the appropriate section(s). The relationship between the incorporated part of the referenced document and the IS/MND has also been described. The documents and other sources used in the preparation of this IS/MND include, but are not limited to:

- City of Hesperia General Plan 2010
- City of Hesperia General Plan Update Final Environmental Impact Report (December 16, 2010)
- City of Hesperia Municipal Code (Codified through Ordinance No. 2022-13, passed September 6, 2022)
- City of Hesperia Main Street and Freeway Corridor Specific Plan (October 16, 2008; amended July 15, 2021)
- City of Hesperia Climate Action Plan (July 20, 2010)
- General Plan Land Use/Zoning Map (February 7, 2020)
- San Bernardino County Countywide Plan 2020

1.3 Documents Prepared for the Project

The stand-alone technical studies prepared for the Project are appended to the IS/MND as follows:

- Air Quality Impact Analysis
- Mobile Source Health Risk Assessment
- Biological Resources Assessment Report
- Cultural and Paleontological Resources Assessment
- Energy Analysis
- Geotechnical Investigation
- Greenhouse Gas Analysis
- Preliminary Hydrology Report
- Conceptual Water Quality Management Plan
- Noise Impact and Vibration Analysis
- Traffic Impact Analysis
- Trip Generation Comparison Analysis
- Vehicle Miles Travelled Analysis

CHAPTER TWO – PROJECT DESCRIPTION

2.1 Project Location and Existing Project Site

The City of Hesperia ("City") is located within the southwestern portion of San Bernardino County, refer to *Figure 1, Regional Vicinity Map*. On a regional basis, the City is accessible via Interstate 15 (I-15), U.S. Federal Highway 395 (US-395), and State Route 18 (SR-18). Jurisdictions surrounding the City of Hesperia include the City of Adelanto to the northwest, Town of Apple Valley to the northeast, City of Victorville to the north, and unincorporated San Bernardino County to the south, east and west.

The Project site is comprised of three (3) parcels (APNs: 0405-072-52, 53, and 55) that total approximately 30.52 acres. The site consists of vacant land that is characterized by level terrain and a mixture of ruderal/disturbed vegetation and Joshua tree woodland. The site is bounded by Avenal Street to the north, Palmetto Way to the south, and Amargosa Road to the east, refer to *Figure 2, Aerial Imagery Map*. Specifically, the Project site is in Section 14, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map.

2.2 Project Characteristics

Rachamin 5, LLC., ("Applicant") proposes to construct up to a 499,714 square-foot industrial building and associated improvements, including loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater facilities, sidewalks, and landscape area. The Project includes approximately 10,000 square feet of office space, 489,714 square feet of industrial/warehouse space, and 255,000 square feet of landscape improvements.

1. Project Trip Generation Comparison

The Project site has a General Plan land use designation of Main Street and Freeway Corridor Specific Plan – Regional Commercial (RC). Project implementation requires a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP). Ganddini Group, Inc. prepared a Trip Generation Comparison Analysis for the proposed Amargosa Road and Palmetto Way Industrial Warehouse Building Project, dated September 6, 2023 (Appendix L). The purpose of the Trip Generation Comparison Analysis is to evaluate the difference in trips generated by the proposed Project under the Commercial/Industrial Business Park (CIBP) land use designation in comparison to an alternative use that is permitted under the existing Regional Commercial (RC) land use designation.

The Trip Generation Comparison Analysis forecasts the proposed Project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 499,700 square feet of high-cube fulfillment center (non-sort) use. Comparatively, the Trip Generation Comparison Analysis forecasts an alternative commercial retail land use trip generation based on regression equations from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). ITE land use code 820 (Shopping Center

(>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use. Which resulted in more trips than the warehousing alternative.

The proposed Project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE Trip Generation Manual and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD). For the alternative commercial retail land use, it should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Therefore, Ganddini reduced the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative commercial retail land use trip generation in accordance with pass-by rates noted in the ITE Trip Generation Manual (11th Edition, 2021) since Amargosa Road adjacent to the Project site is a low volume roadway and pass-by trips would be minimal.

The proposed Project is forecast to generate approximately 1,083 daily Passenger Car Equivalent (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour. Truck trips would amount to 293 total daily trips, 26 am trips and 6 pm trips. The alternative commercial retail land use is forecast to generate a total of approximately 27,280 daily trips, including 1,007 PCE trips during the AM peak hour and 2,149 PCE trips during the PM peak hour without a pass-by trips reduction. Therefore, the proposed Project is forecast to generate approximately 25,505 fewer daily trips compared to a commercial retail land use of equivalent size, including 870 fewer trips during the AM peak hour and 2,035 fewer trips during the PM peak hour.

Based on the Trip Generation Comparison Analysis, the proposed Project consisting of a 499,850 square foot high-cube fulfillment center warehouse building is forecast to generate substantially fewer trips (up to 659% fewer daily trips) compared to an alternative land use composed of 499,850 square feet of commercial retail.

In addition to trip generation forecasts, Ganddini calculated directional distribution patterns for the Project generated trips and the alternative commercial retail land use generated trips. One hundred percent (100%) of the Project inbound, and outbound truck traffic will be distributed from and towards Main Street. Additionally, seventy-five percent (75%) of the Project inbound, and outbound car traffic will be distributed from and towards Main Street and only twenty-five percent (25%) of the Project inbound and outbound car traffic will be distributed from and towards Bear Valley Road. Comparatively, sixty percent (60%) of the alternative commercial retail land use traffic will be distributed towards Main Street and forty percent (40%) of the alternative commercial retail land use traffic will be distributed towards Bear Valley Road.

The Trip Generation Comparison Analysis also includes comparison of the intersection turning movement volumes for the proposed Project and the alternative commercial land use. The alternative commercial retail land use is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed Project for all turning movements at each study area intersection where peak hour trips are expected to be added.

2. On-Site and Off-Site Improvements

The Project includes improvements along Palmetto Way and Avenal Street, including frontage landscaping and pedestrian improvements. Project landscape conforms to City requirements for industrial uses (Main Street and Freeway Corridor Specific Plan Chapter 11: *Industrial Design Standards and Guidelines*, Section D). Frontage landscaping includes a variety of trees, shrubs, plants, and land covers within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse building to comprise 19.1% (255,000 SF) of the Project site.

3. Site Access, Circulation, and Parking

Regional access to the Project site is provided via I-15 and Amargosa Road. The proposed Project includes three (3) driveways off Palmetto Way. Direct access to the paved tractor-trailer parking area is provided by a 45-foot truck only driveway at the southwest corner of the site and a 50-foot driveway on the south side of the site for both autos and trucks. Direct access to the paved passenger vehicle parking area is provided by a 50-foot driveway at the southeast corner of the site for both autos and trucks. In total, the proposed Project includes 72 loading dock positions, 256 tractor-trailer stalls, and 251 passenger vehicle parking spaces.

4. Utility Improvements

The proposed Project includes a combination of an at grade detention basin and underground infiltration basin to treat stormwater runoff for water quality purposes. Additionally, due to the vacant, undeveloped nature of the Project site, both dry and wet utilities, including domestic water, sanitary sewer, and electricity, need to be extended onto the Project site.

5. Operations

A tenant for the Project has not been identified at this time; however, the facility is designed to accommodate approximately 500 to 600 employees. Hours of operation are anticipated to be 24 hours a day, 7 days a week.

6. Specific Plan Amendment and Zone Change and Development Code Amendment

The General Plan land use designation of the Project site is Main Street and Freeway Corridor Specific Plan – Regional Commercial (RC) and the zoning designation is Regional Commercial (RC). Implementation of the Project requires a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP), refer to *Figure 3, Existing and Proposed Land Use Designation*. Additionally, the Project involves a Zone Change to modify the Project site's zoning from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP), refer to *Figure 4, Existing and Proposed Zoning*.

Additionally, the Project is required to submit a Development Code Amendment application to amend the approved truck route to designate Amargosa Road as a new truck route from Avenal Street to Main Street, in compliance with AB 98. This amendment ensures consistency with City truck route requirements and state regulations for industrial, and warehouse uses.

2.3 Project Approvals

As part of the Project, the Project Applicant is requesting approval of the following entitlements:

- **Specific Plan Amendment** to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP).
- **Conditional Use Permit** to permit the construction and operation of a warehousing and distribution center of a size greater than 200,000 square feet in the Commercial/Industrial Business Park zone.
- **Development Code Amendment** to designate Amargosa Road as a new truck route from Avenal Street to Main Street in compliance with AB 98.

Subsequent non-discretionary approvals (which would require separate processing through the City) would include, but may not be limited to, a grading permit, building permits, and occupancy permits.

CHAPTER THREE – ENVIRONMENTAL CHECKLIST

3.1 Project Summary

1. Project Title:
Amargosa Road and Palmetto Way Industrial Warehouse Building

2. Lead Agency Name and Address:
City of Hesperia,
9700 Seventh Avenue
Hesperia, CA 92345

3. Contact Person and Phone Number:
Edgar Gonzalez, Senior Planner
Planning Division
P: (760) 947-1330
E: egonzalez@hesperiaca.gov

4. Project Location:
The City of Hesperia ("City") is located within the southwestern portion of San Bernardino County, refer to *Figure 1, Regional Vicinity Map*. On a regional basis, the City is accessible via Interstate 15 (I-15), U.S. Federal Highway 395 (US-395), and State Route 18 (SR-18). Jurisdictions surrounding the City of Hesperia include the City of Adelanto to the northwest, Town of Apple Valley to the northeast, City of Victorville to the north, and unincorporated San Bernardino County to the south, east and west.

The Project site is comprised of three (3) parcels (APNs: 0405-072-52, 53, and 55) that total approximately 30.52 acres. The site consists of vacant land that is characterized by level terrain and a mixture of ruderal/disturbed vegetation and Joshua tree woodland. The site is bounded by Avenal Street to the north and west, Palmetto Way to the south, and Amargosa Road to the east, refer to *Figure 2, Aerial Imagery Map*. Specifically, the Project site is in Section 14, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map.

5. Project Applicant's Name and Address:
Mr. Ramin Namvar
Rachamim 5, LLC
6001 E. Slauson Avenue
Commerce, CA 90040

6. General Plan Designation:
Existing: Main Street and Freeway Corridor Specific Plan – Regional Commercial (RC)

Proposed: Main Street and Freeway Corridor Specific Plan – Commercial/Industrial Business Park (CIBP)

(see *Figure 3, Existing and Proposed Land Use Designation*)

7. Zoning:

Existing: Regional Commercial (RC)

Proposed: Commercial/Industrial Business Park (CIBP)

(see *Figure 4, Existing and Proposed Zoning)*

8. Project Description:

Rachamin 5, LLC., ("Applicant") proposes to construct up to a 499,714 square-foot industrial building and associated improvements, including loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater facilities, sidewalks, and landscape area on approximately 30.52 acres in the City of Hesperia ("City"). The Project includes approximately 10,000 square feet of office space, 489,714 square feet of industrial/warehouse space, and 255,000 square feet of landscape improvements. In total, the proposed Project includes 72 loading dock positions, 256 tractor-trailer stalls, and 251 passenger vehicle parking spaces, refer to *Figure 5, Site Plan* (July 2022). The Project site is comprised of three (3) parcels (APNs: 0405-072-52, 53, and 55) and is located south of Avenal Street, north of Palmetto Way, and west of Amargosa Road. Project implementation involves a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP), and a Zone Change to modify the Project site's zoning from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP). Additionally, the Project requires a Conditional Use Permit to permit the construction and operation of a warehousing and distribution center of a size greater than 200,000 square feet in the Commercial/Industrial Business Park zone.

9. Surrounding Land Uses and Setting:

Land uses surrounding the Project site primarily consist of vacant land, along with some scattered residential, industrial, and utility uses. Specific land uses located in the immediate vicinity of the Project site are provided in the table below.

Location	Existing Land Use	Land Use / Zoning Designation (MSFC-SP)
Project Site	Vacant Land	Regional Commercial (RC)
North	Vacant/Residential	City of Victorville
South	Distribution Warehouse	Commercial Industrial Business Park (CIBP)
East	Amargosa Road/I-15 Freeway	Regional Commercial (RC)
West	Vacant/Utility Building	Regional Commercial (RC)

10. Other Public Agencies Whose Approval is Required (e.g., permits, financing approval, or participation agreement)

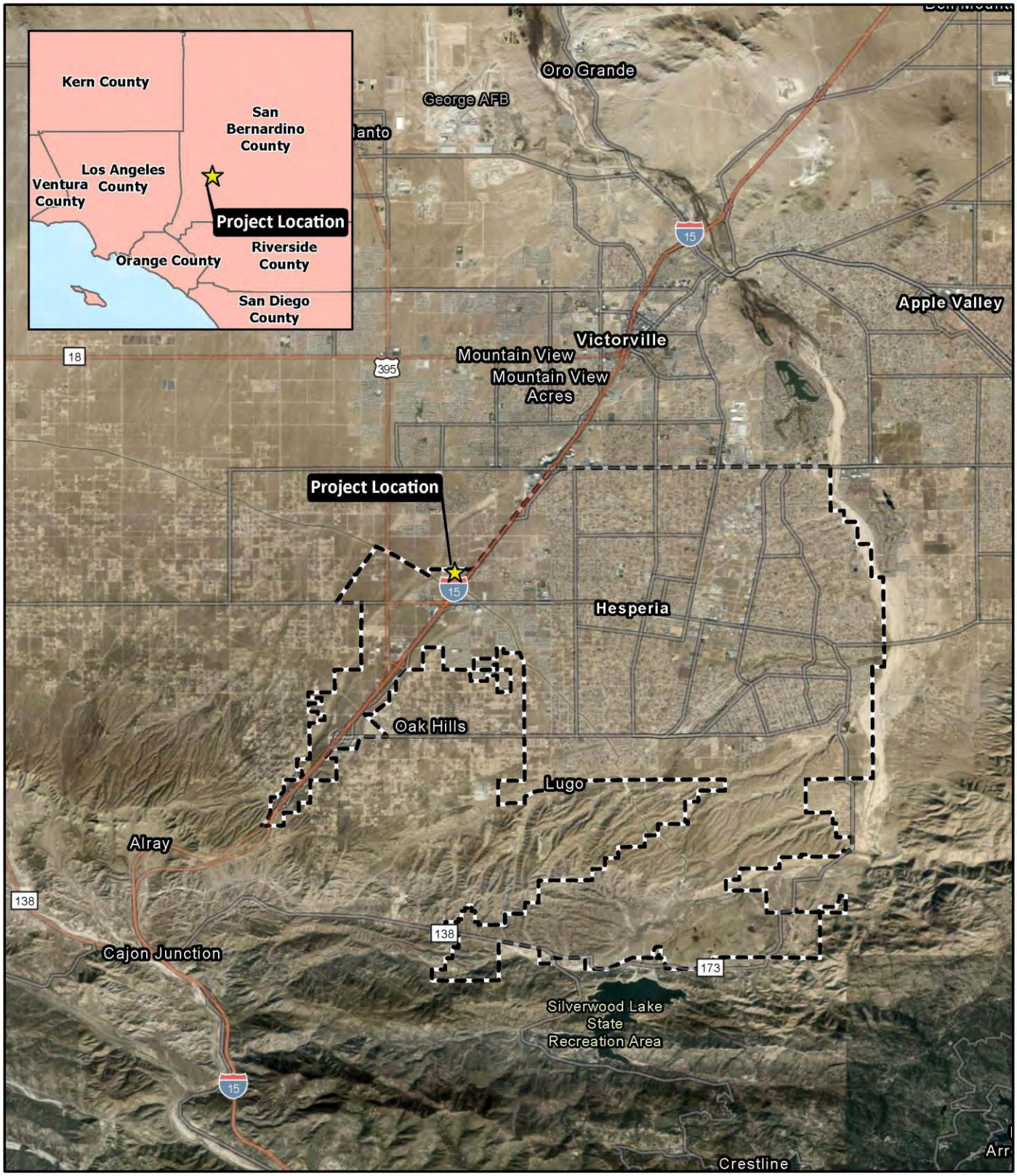
- California Department of Fish and Wildlife

11. California Native American Tribes

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

The City, Lead Agency, has initiated the AB 52 process sending letters the applicable tribes on October 17, 2024. Three tribes were contacted: The Cabazon Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, and the Yuhaaviatam of San Manual Nation. The Yuhaaviatam of San Manual Nation provided mitigation measures. These mitigation measures are incorporated into Section XVIII. Tribal Cultural Resources of this IS/MND. Consultation will continue through grading operations as required by AB 52.



CASC Engineering and Consulting
www.cascinc.com

N

0 1.43 2.85 5.7

1" = 3.95 miles

Figure 1
Regional Vicinity

APN: 0405-072-[52,53,55]

City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Earthstar Geographics, Esri, USGS

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.



CASC Engineering and Consulting
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N

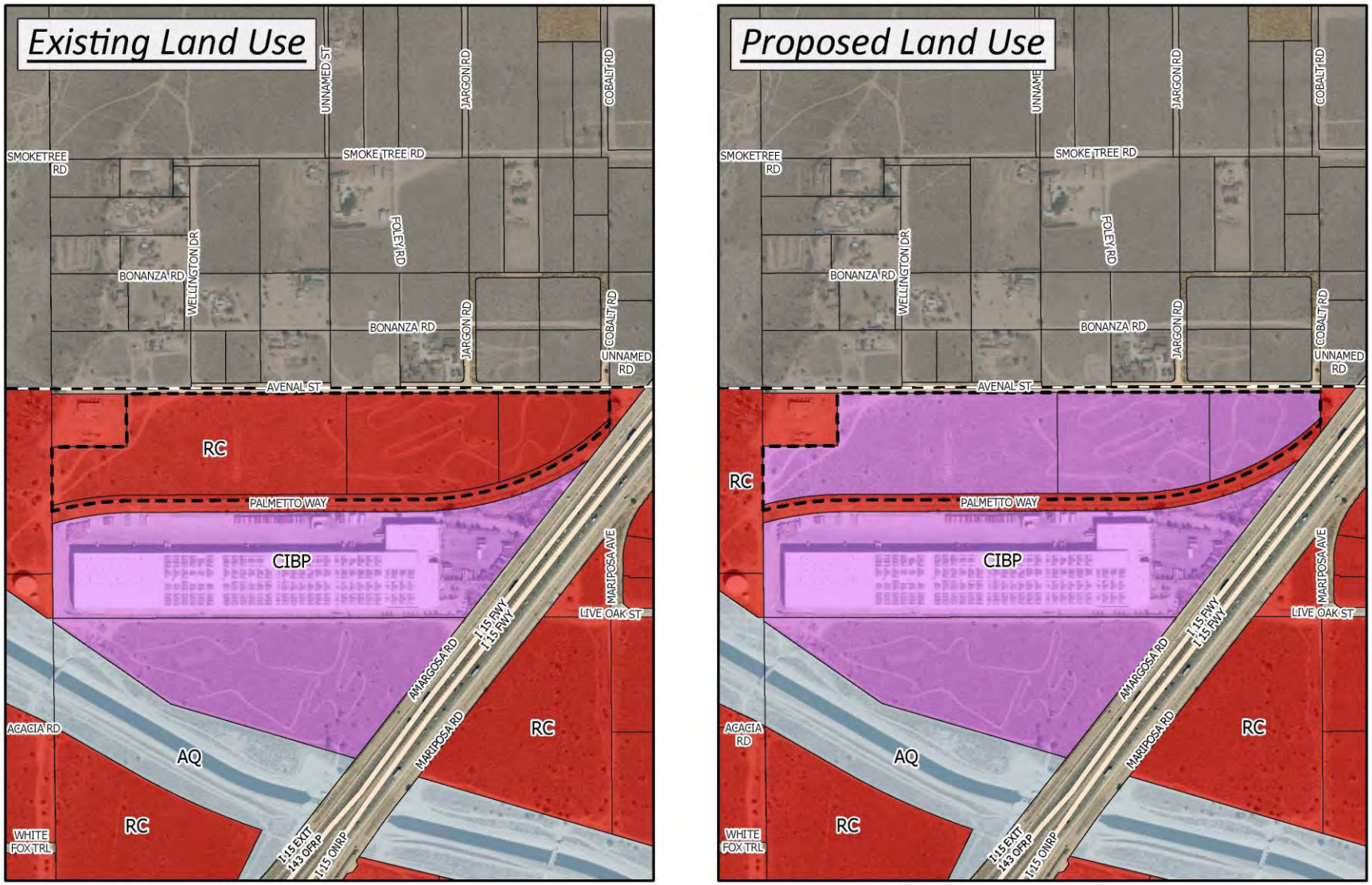
0 0.07 0.13 0.26
1" = 3.95 miles

Figure 2
Aerial Imagery Map

APN: 0405-072-[52,53,55]

San Bernardino County, Maxar, Esri Community Maps Contributors, City of Hesperia, California State Parks, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.



CASC Engineering and Consulting
www.caseinc.com

San Bernardino County, Maxar

Figure 3

Existing and Proposed Land Use Designation

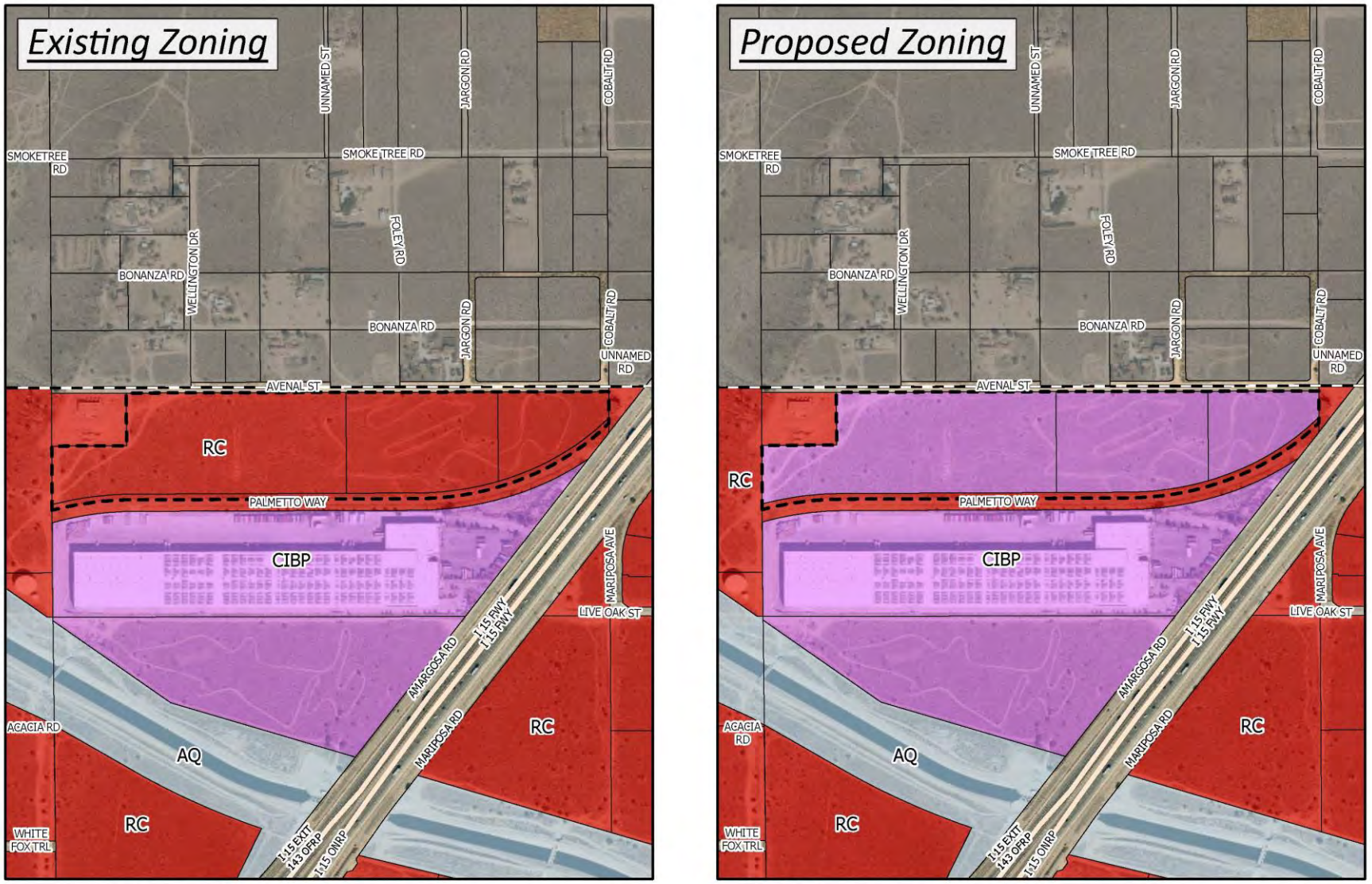
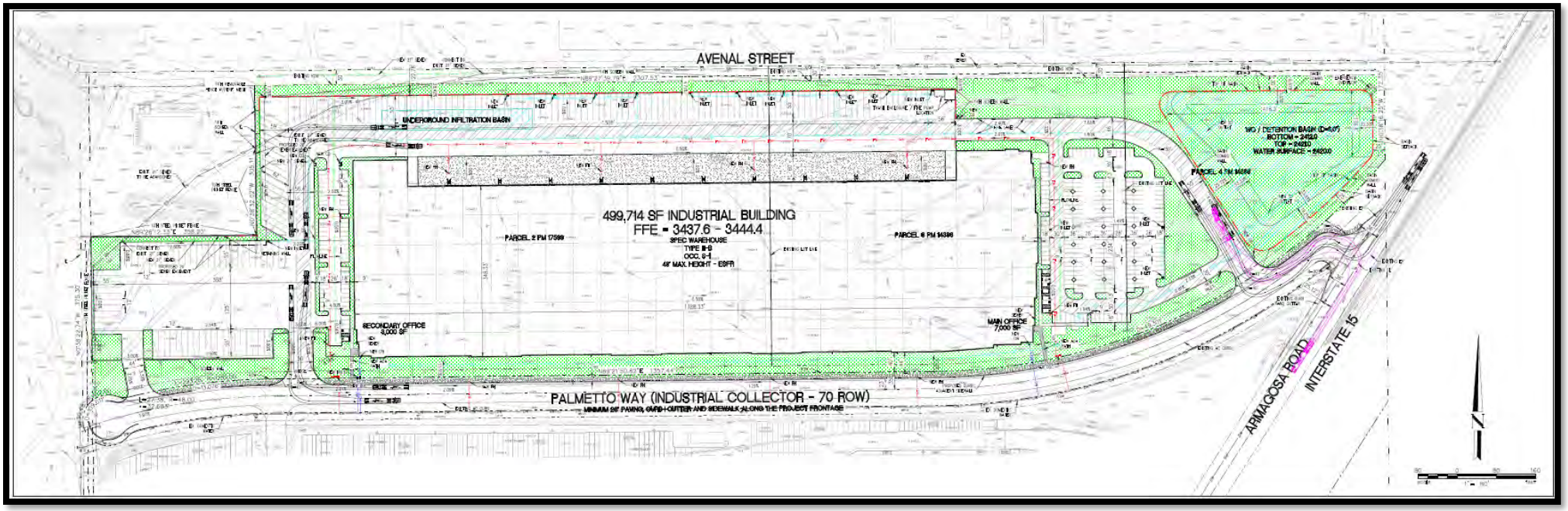


Figure 4

Existing and Proposed Zoning

Figure 5: Site Plan (July 2025)



3.2 Environmental Factors Potentially Affected

The environmental factors checked below (☒) would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Energy
☐	Geology/Soils	☒	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials
☐	Hydrology/Water Quality	☐	Land Use/Planning	☐	Mineral Resources
☐	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☒	Transportation/Traffic	☐	Tribal Cultural Resources
☐	Utilities/Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

3.3 Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been adequately analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Edgar Gonzalez — Date
Senior Planner

3.4 Evaluation of Environmental Impacts

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the Project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the Project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant Impact with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

    a) **Earlier Analysis Used.** Identify and state where they are available for review.

    b) **Impacts Adequately Addressed.** Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c) **Mitigation Measures.** For effects that are "Less than Significant Impact with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used, or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

    a) the significance criteria or threshold, if any, used to evaluate each question; and

    b) the mitigation measure identified, if any, to reduce the impact to less than significant.

CHAPTER FOUR – INITIAL STUDY CHECKLIST AND SUBSTANTIATION

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Transportation/Traffic – Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☒	☐	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Circulation Element
    b. Safety Element
2. Hesperia Main Street and Freeway Corridor Specific Plan, amended July 15, 2021.
    a. Chapter 13 Circulation Improvements
3. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.15 – Transportation
4. Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis. Ganddini Group, Inc. September 6, 2023. (Appendix L)
5. Amargosa and Palmetto High-Cube Warehouse Revised Traffic Impact Analysis. Ganddini Group, Inc. August 21,2025. (Appendix K)
6. Amargosa and Palmetto High-Cube Warehouse Project Vehicle Miles Traveled Analysis, Ganddini Group, Inc. July 8, 2025.

Discussion of Impacts

Would the project:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than Significant Impact with Mitigation Incorporated: A Traffic Impact Analysis (TIA) was prepared by Ganddini Group, Inc dated August 18, 2022. A revised TIA was completed by Ganddini Group on August 21, 2025. The purpose of the TIA is to assess

potential transportation impacts resulting from development of the proposed Project both in the context of the California Environmental Quality Act (CEQA) and City of Hesperia discretionary authority. In accordance with City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020), existing and future conditions were analyzed for the proposed Project. Based on the study intersections identified in the approved scoping agreement, the study area consists of the following study intersections within the City of Hesperia and California Department of Transportation jurisdictions:

1. Amargosa Road (NS) at Palmetto Way (EW)
2. Key Pointe Drive (NS) at Amargosa Road (EW)
3. Key Pointe Drive (NS) at Main Street (EW)
4. I-15 SB Offramp (NS) at Main Street (EW)
5. I-15 NB Ramps (NS) at Main Street (EW)
6. Project West Driveway (NS) at Palmetto Way (EW)
7. Project Central Driveway (NS) at Palmetto Way (EW)
8. Project East Driveway (NS) at Palmetto Way (EW)

The following scenarios were analyzed during typical weekday AM and PM peak hour conditions:

- Existing
- Opening Year (2027) Without Project
- Opening Year (2027) With Project
- General Plan Buildout (2040) Without Project
- General Plan Buildout (2040) With Project

All study intersections are forecast to operate within acceptable Levels of Service (D or better) during peak hour conditions for Existing, Opening Year (2027) Without Project, and Opening Year (2027) With Project scenarios. Additionally, all study intersections except for the Key Pointe Drive (NS) at Main Street (EW) intersection are forecast to operate within acceptable Levels of Service (D or better) during peak hour conditions for General Plan Buildout (2040) With Project and General Plan Buildout (2040) Without Project scenarios.

The Key Pointe Drive (NS) at Main Street (EW) intersection is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour for General Plan Buildout (2040) With Project and General Plan Buildout (2040) Without Project scenarios. Mitigation Measure **TRANS-1** requires that the Project's fair share is contributed, as determined by the City, to construct a second southbound left turn lane at Key Pointe Drive (NS) at Main Street (EW). **TRANS-1** will ensure that the proposed Project will result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions, and impacts will be reduced to less than significant.

A Trip Generation Comparison Analysis was prepared by Ganddini Group, Inc dated November 28, 2022, and updated on February 28, 2025, and updated again on July 8, 2025. The Project proposes a Specific Plan Amendment to modify the Project site's Main Street and Freeway Corridor Specific Plan land use designation from Regional Commercial (RC) to Commercial/Industrial Business Park (CIBP). The purpose of the analysis is to evaluate the change in trip generation that can be expected between the proposed Project which is permitted under the CIBP land use designation, and an alternative land use consisting of

commercial retail that is permitted under the existing RC land use designation. The proposed Project is forecast to generate approximately 1,083 daily Passenger Car Equivalent (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour. The alternative land use consisting of commercial retail is forecast to generate a total of approximately 25,505 daily trips, including 870 fewer trips during the AM peak hour and 2,035 trips during the PM peak hour.

For the alternative commercial retail land use, it should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Therefore, Ganddini reduced the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative commercial retail land use trip generation in accordance with pass-by rates noted in the ITE Trip Generation Manual (11th Edition, 2021) since Amargosa Road adjacent to the Project site is a low volume roadway and pass-by trips would be minimal.

The proposed Project is forecast to generate approximately 25,505 fewer daily trips compared to a commercial retail land use of equivalent size, including 870 fewer trips during the AM peak hour and 2,035 fewer trips during the PM peak hour. Based on the trip generation comparison analysis, the proposed Project consisting of a 499, 714 square-foot industrial building is forecast to generate substantially fewer trips (up to 659% fewer daily trips) compared to an alternative land use composed of 499,714 square feet of commercial retail. Therefore, the Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, impacts would be less than significant.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Potentially Significant Impact: CEQA Guidelines Section 15064.3 subdivision (b) regards Vehicle Miles Traveled (VMT) and whether the land use project will generate vehicle miles traveled in excess of an applicable threshold of significance. Based on the VMT Analysis prepared by Ganddini Group (dated July 8, 2025), the Project is estimated to generate 73.7 vehicle miles traveled (VMT) per service population under baseline conditions and 38.9 VMT per service population under cumulative conditions. Both estimates exceed the City's established VMT significance threshold of 38.3 VMT per service population. Therefore, the Project would result in a significant transportation impact without mitigation. This topic will be further analyzed in an EIR for the Project.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact: The Project would not result in any major modifications to the existing access or circulation features. The proposed Project does not include any sharp curves or traffic intersection crossings. Therefore, the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, a less than significant impact would occur.

d) Result in inadequate emergency access?

Less than Significant Impact: The proposed Project is compatible with the design and

operation of the street network and would not result in any major modifications to the existing access or circulation features. The Project proposes three (3) driveways off Palmetto Way. Direct access to the paved tractor-trailer parking area is provided by a 45-foot truck only driveway at the southwest corner of the site, and a 50-foot auto and truck driveway on the south side of the site. Direct access to the paved passenger vehicle parking area is provided by a 50-foot auto and truck driveway at the southeast corner of the site. The Project conforms with local, state, and federal regulations regarding circulation and traffic pattern design. The driveways accommodate traditional fire apparatus, allowing for adequate emergency access. The Project would not result in inadequate emergency access to the Project site. Thus, a less than significant impact would occur.

Mitigation Measures

Mitigation:

(a)

TRANS-1: Contribute fair share, as determined by the City, to construct a second southbound left turn lane at Key Pointe Drive (NS) at Main Street (EW).

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Aesthetics – Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    - Open Space Element
    - Conservation Element
2. Hesperia Main Street and Freeway Corridor Specific Plan, amended July 15, 2021.
    - Chapter 14 Open Space and Streetscape Improvements
3. Title 16 – Development Code of the Hesperia Municipal Code
    - Section 16.20.135 – Glare
    - Chapter 16.16.405 – Site design standards and guidelines
4. California Department of Transportation, 2018. List of eligible and officially designated State Scenic Highways. 2018. Available on-line at: Scenic Highways | Caltrans

Discussion of Impacts

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact: The Hesperia General Plan identifies scenic resources within the City such as the Mojave River, the San Gabriel and San Bernardino Mountains, the Mojave Desert and other surrounding mountains and valleys. The City also consists of numerous washes and other natural water courses such as the Oro Grande Wash, Antelope Valley Wash, Unnamed Wash #2 (Honda Valley Wash), and Unnamed Wash #1 east of Interstate 15. The designated washes provide physical and visual relief from the urban developments and direct stormwater flow safely through the City.

The Project site is located east of the Oro Grande Wash, adjacent to the Wash Protection Overlay boundary. General Plan Exhibit OS-7 identifies three (3) preservation areas within the Oro Grande Wash and the Unnamed Wash #1 that have minimal disturbance and exemplify natural desert habitat. The designated preservation areas within the Wash Protection Overlay boundary are located approximately one (1) mile south, 3.45 miles southwest, and four (4) miles southwest of the Project site. The portion of the Oro Grande Wash adjacent to the Project site has been extensively used by off-road motorcycles and is designated as Recreational-Commercial. The Recreational-Commercial designation allows a broader range of intensive recreational uses. Although the designation allows a greater range of uses, there are restrictions on buildings and development to preserve general landform and landscape. The Recreational-Commercial designation is also utilized as a buffer between the commercial/industrial land uses located adjacent to the freeway and the residential land uses within Oak Hills.

The proposed Project consists of an industrial building up to 499,714 square feet and associated improvements, including loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater facilities, sidewalks, and landscape area. The Project site is not located within the Wash Protection Overlay and the proposed development does not extend into the Wash Protection Overlay boundary. Scenic views from the Project site include distant views of the San Bernardino and San Gabriel Mountains, located south, southwest, and southeast of the site as well as views of the Mojave Desert. The Project site is surrounded by vacant land and residential uses to the north, vacant land and a utility building to the west, Amargosa Road and I-15 Freeway to the east, and a distribution warehouse to the south. The existing distribution warehouse south of the Project site disrupts south, southwest, and southeast views from the Project site. Furthermore, the proposed Project is consistent in scale and character with the existing distribution warehouse. Therefore, Project impacts on a scenic vista would be less than significant.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than Significant Impact: The Project site is not located within or adjacent to a scenic highway corridor and does not contain scenic resources, such as rock outcroppings or historic buildings. The nearest State-designated scenic highway is a portion of SR-2 located approximately 15.7 miles southwest of the Project site. Additionally, the nearest State-eligible scenic highway is a portion of SR-138 located approximately 8.0 miles south of the Project site. Therefore, Project impacts on scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway would be less than significant.

c) In nonurbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact: The Project site is located within an urbanized area and is surrounded by vacant land and residential uses to the north, vacant land and a utility

building to the west, Amargosa Road and I-15 Freeway to the east, and a distribution warehouse to the south. The proposed Project complies with the development standards of the CIBP zone and the Industrial Design Standards and Guidelines within the Main Street and Freeway Corridor Specific Plan (MSFC-SP). The design specifications for the Project will be reviewed by the City for compliance with all applicable provisions set forth by the City's Development Code and the Specific Plan. As part of the City's development review process, the Project's architectural plans are reviewed by City staff and the Planning Commission to determine whether Project design conforms to the Development Code and Specific Plan. Furthermore, the proposed Project is consistent in scale and visual character with the existing distribution warehouse south of the Project site. Therefore, the Project would not conflict with applicable zoning or other regulations governing scenic quality and impacts would be less than significant.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant Impact: The proposed Project would introduce new sources of light at the Project site including building, parking, and security lighting. Specific Plan Section II, Chapter 11, Item 14 includes design standards for outdoor lighting that apply to industrial development within the MSFC-SP. The MSFC-SP lighting standards govern the placement and design of outdoor lighting fixtures to ensure adequate lighting for public safety while also minimizing light pollution and glare and precluding public nuisances (e.g., unusually high intensity or poor directional lighting that intrudes into neighboring properties or public rights-of-way). Although the proposed Project would be required to adhere to the applicable requirements of the Specific Plan, the proposed Project would introduce new sources of light and glare as the Project includes the construction of an industrial building on an undeveloped Project site. Conformance with the Specific Plan would minimize the potential for the Project to result in adverse light and glare impacts. Therefore, additional light sources are not anticipated to be substantial enough to adversely affect day or nighttime views in the area, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Agriculture and Forestry Resources – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to the information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resource Code section 122220(g)), timberland (as defined by Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    - Open Space Element
    - Conservation Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    - 3.2 – Agricultural Resources

3. California Department of Conservation (CDC), California Important Farmland Finder (CIFF), 2018

Discussion of Impacts

a) Would the project convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use?

No Impact: The CDC Farmland Mapping and Monitoring Program (FMMP) identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance or Potential, and Grazing Land. The classification of farmland is determined by a soil survey conducted by the Natural Resources Conservations Service (NRCS) which analyses the suitability of soils for agricultural production. Based on the California Important Farmland Finder, the Project site is classified as "Grazing Land". Therefore, the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. No impact would occur.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact: The Project site is currently zoned as Regional Commercial (RC) and the proposed zoning designation is Commercial/Industrial Business Park (CIBP). According to the Hesperia General Plan Update Environmental Impact Report (EIR) Exhibit 3.2-2 Williamson Act Map, the Project site is not subject to a Williamson Act Contract. Additionally, there are no properties within the Project's vicinity subject to a Williamson Act Contract. Therefore, the proposed Project would have no potential to conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resource Code section 122220(g)), timberland (as defined by Public Resource Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?

No Impact: The Project site is designated Regional Commercial (RC) and the proposed zoning designation is Commercial/Industrial Business Park (CIBP). According to the City's Zoning Map, the Project site is not located within or adjacent to forest land, timberland, or timberland zoned Timberland Production. Therefore, no impact would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact: The Project site is currently vacant and consists of disturbed native vegetation. The site contains sparsely scattered shrubs, trees, and vegetation communities that would not qualify as forest land. Thus, the proposed Project would not result in the conversion of forest land to non-forest use. No impact would occur.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use?

No Impact: As previously discussed under Section II (a), the Project site is classified as "Grazing Land" by the California Department of Conservation and does not meet the definition of Farmland (i.e., "Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance"). The Project site contains no active agricultural uses under existing conditions. Accordingly, implementation of the Project would not convert areas on the subject property classified as Farmland to non-agricultural use. Additionally, neither the Project site nor its surroundings contain forest land. Therefore, the Project would not result in the conversion of forest land to non-forest use. No impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Air Quality – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    - Conservation Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    - 3.3 – Air Quality
3. Title 16 – Development Code of the Hesperia Municipal Code
    - Chapter 16.16.360 – Additional development standards
4. Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis City of Hesperia. Urban Crossroads, Inc. February 1, 2023. (Appendix A)
5. Amargosa and Palmetto High-Cube Warehouse Mobile Source Health Risk Assessment City of Hesperia. Urban Crossroads, Inc. February 1, 2023 (Appendix B)

Discussion of Impacts

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact: The Project site is located within the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The MDAQMD encompasses approximately 20,000 square miles including San Bernardino County's High Desert and Riverside County's Palo Verde Valley. The MDAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards through the implementation of an Air Quality Management Program (AQMP).

Currently, the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are exceeded in most parts of the MDAB. The attainment

status of criteria pollutants in the MDAB is shown in Table 4-1 below. In response, the MDAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

Table 4-1 Attainment Status of Criteria Pollutants in the MDAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassifiable/Attainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb	Attainment	Unclassifiable/Attainment

Note "-" = The national 1-hour O3 standard was revoked effective June 15, 2005.

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with the indicators discussed below:

Criterion 1 - Local land use plans and/or population projections

The existing General Plan land use designation of the Project site is Main Street and Freeway Corridor Specific Plan – Regional Commercial (RC) and the proposed designation is Main Street and Freeway Corridor Specific Plan – Commercial/Industrial Business Park (CIBP). The Project uses are allowed under the site's proposed CIBP General Plan land use designation. The Project requires a Specific Plan Amendment and a Zone Change affecting the Project site. The CIBP land use designation allows for a maximum FAR of 0.5 and the proposed Project site has a FAR of 0.376 which is in conformance with the CIBP land use designation. The CIBP land use designation is intended to provide for service commercial, light industrial, light manufacturing, and industrial support uses, mainly conducted in enclosed buildings, which will produce only a small environmental impact, such as noise, vibration, air pollution, glare, or waste disposal.

Criterion 2 - All MDAQMD Rules and Regulations

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visible Emissions), 402 (Nuisance), and 403 (Fugitive Dust).

Criterion 3 - Demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards

Consistency Criterion No. 3 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional significance thresholds were exceeded. As evaluated in the Air Quality Impact Analysis (Appendix A), the Project's regional construction and operational-source emissions would not exceed applicable regional significance thresholds.

The Project would not have the potential to result in or cause NAAQS or CAAQS violations. Additionally, Project construction and operational-source emissions would not exceed the regional significance thresholds. Further, the Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase. The Project is therefore considered to be consistent with the AQMP and a less than significant impact is expected.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact: The CAAQS designate the Project site as nonattainment for O3 (1-hour and 8-hour) and PM10, and the NAAQS designates the Project site as nonattainment for O3 (8-hour) and PM10. The AQMD states that individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed MDAQMD thresholds for project-specific impacts would be considered cumulatively considerable. The following analysis is based on the Air Quality Impact Analysis prepared by Urban Crossroads (Appendix A).

The MDAQMD has developed regional significance thresholds for criteria pollutants, as summarized in Table 4-2. The MDAQMD's Guidelines indicate that any projects in the MDAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

Table 4-2 Maximum Daily Regional Emissions Thresholds

Pollutant	Daily Threshold (lbs/day)
CO	548 lbs/day
NO_x	137 lbs/day
VOC	137 lbs/day lbs/day
SO_x	137 lbs/day
PM_{10}	82 lbs/day

$PM_{2.5}$	65 lbs/day

*lbs/day – Pounds Per Day

Construction Related Impacts

The Project involves construction activities associated with site preparation, grading, building construction, paving, and architectural coating. Construction activities associated with the Project would result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Construction is scheduled to occur from January 2023 to December 2023. Table 4-3 presents the results of the Project's regional construction impact assessment.

Table 4-3 Emissions Summary of Construction - Without Mitigation

Year	Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2023	2.70	16.30	36.00	0.04	3.91	1.37
Winter						
2023	70.80	89.00	73.50	0.12	13.50	7.97
Maximum Daily Emissions	**70.80**	**89.00**	**73.50**	**0.12**	**13.50**	**7.97**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

The Project-specific evaluation of emissions presented in Tables 4-3 demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operation Related Impacts

Long-term air quality impacts generally involve mobile source emissions generated from project-related traffic and stationary source emissions. Operational emissions would be expected from the following primary sources—mobile source emissions, area source emissions, energy source emissions, and on-site cargo handling equipment emissions. The estimated emissions generated by Project operations are shown in Table 4-4, which presents the results of the Project's regional operation impact assessment. The Project would not exceed the thresholds of significance established by the MDAQMD for emissions of any criteria pollutant. Therefore, operational emissions would be less than significant.

Table 4-4 Summary of Peak Operational Emissions

Source	Emissions (pounds/day)					
	VOC	NO_X	CO	SOx	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	4.67	13.60	62.00	0.21	5.55	1.22
Area Source	15.10	0.18	21.70	<0.005	0.03	0.04
Energy Source	0.14	2.55	2.14	0.02	0.19	0.19
On-Site Equipment Source	0.23	0.75	32.89	0.00	0.06	0.05

Total Max Daily Emissions	**20.14**	**17.08**	**118.73**	**0.23**	**5.83**	**1.50**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Winter						
Mobile Source	4.27	14.60	46.70	0.20	5.55	1.22
Area Source	11.50	0.00	0.00	0.00	0.00	0.00
Energy Source	0.14	2.55	2.14	0.02	0.19	0.19
On-Site Equipment Source	0.23	0.75	32.89	0.00	0.06	0.05
Total Max Daily Emissions	**16.14**	**17.90**	**81.73**	**0.22**	**5.80**	**1.46**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in an exceedance of regional thresholds. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is designated non-attainment under an applicable federal or state ambient air quality standard. Therefore, the proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact: Sensitive receptors in the Project study area are listed below. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

- Residence at 13030 Avenal Street, approximately 71 feet north of the Project site.
- Residence at 13164 Avenal Road, approximately 76 feet north of the Project site.
- Residence at 10445 Avenal Street, approximately 1,263 feet east of the Project site.
- Residence at 13500 Live Oak Street, approximately 1,071 feet southeast of the Project site.
- Residence at 10376 Wellington Road, approximately 227 feet north of the Project site.
- MGA Entertainment, Inc., located at 10200 Amargosa Road, approximately 201 feet south of the Project site.

The Project would have a potentially significant health risk impact if it results in a maximum incremental cancer risk from emission of Toxic Air Contaminants (TACs) of ≥ 10 in one million and/or a chronic & acute hazard index that is ≥1.0. In the case of the Project, the TAC of concern is diesel particulate matter (DPM) that could be generated by Project construction activities, and on-site and off-site DPM that would result from on-going Project operations. Urban Crossroads, Inc. prepared a Mobile Source Health Risk Assessment (Appendix B), dated February 1, 2023, to evaluate the potential mobile-

source emissions health risk impacts associated with the development of the proposed Project.

The maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 2.13 in one million, and the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.20 in one million, which is less than the MDAQMD significance threshold of 10 in one million. Additionally, non-cancer risks were estimated to be <0.01 for both construction and operational impacts, which would not exceed the applicable threshold of 1.0. Table 4-5 provides a summary of the combined construction and operational cancer and non-cancer risks.

Table 4-5 Summary of Construction and Operational Cancer and Non-Cancer Risks

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	2.22	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

The Project-specific evaluation of mobile-source emissions demonstrates that the Project would not result in any potentially significant health risk impacts from exposure to DPM emissions. Project construction and operation will not cause a significant human health or cancer risk to adjacent land uses, a less than significant impact would occur.

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?

Less than Significant Impact: The Project will not involve land uses that are typically associated with odor complaints such as, agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The Project would also be required to comply with MDAQMD Rule

402 (Nuisance) to prevent occurrences of public nuisances. Therefore, odors associated with the Project construction and operations would be less than significant and no mitigation is required.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Biological Resources: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    - Open Space Element
    - Conservation Element
2. Hesperia Main Street and Freeway Corridor Specific Plan, amended July 15, 2021.
    - Chapter 14 Open Space and Streetscape Improvements

3. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    - 3.4 – Biological Resources
4. Title 16 – Development Code of the Hesperia Municipal Code
    - Chapter 16.24 Protected Plants – Article III Riparian Plant Conservation
5. Desert Native Plant Protection Ordinance Section 88.01.060, County of San Bernardino Development Code, Chapter 88.01 Plant Protection and Management:
6. Tree or Plant Removal Permits Ordinance Section 88.01.050
7. Desert Native Plants Act (Food and Agricultural Code §§ 80001 et seq.)
8. California Food and Agriculture Code, Division 23, Chapter 3: Regulated Native Plants, Ordinance Section 80073
9. Western Joshua Tree Regulations, San Bernardino County, February 2021. Mojave Desert Land Trust (mdlt.org)
10. Joshua trees are now protected by the State of California as a candidate for listing as an endangered species | EZ Online Permitting (sbcounty.gov). Posted October 15, 2020.
11. California Endangered Species Act (CESA) (Office of Administrative Law's Notice ID #Z2019-1112-01 and Z2020-0924-01 Petition to list Western Joshua Tree (*Yucca brevifolia*) as an Endangered Species).
12. Amargosa Road & Palmetto Way Spec. Industrial Project Biological Resources Assessment Report. Casc Engineering and Consulting, Inc. October 2022. (Appendix C)

Discussion of Impacts

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?

Less Than Significant Impact with Mitigation Incorporated: Casc Engineering and Consulting (Casc) biologist performed a biological site assessment and species inventory at the Project site from April through July of 2022. Prior to circulation of the Draft EIR, biological surveys will be conducted to confirm potential impacts on biological resources. The results of the assessment are included in the Biological Resource Assessment Report (Appendix C). Prior to the site assessment, Casc's biologists researched readily available information, including previous studies and reports, relevant literature, databases, agency websites, Geographic Information Systems (GIS) data, maps, aerial imagery from public domain sources, and in-house records. Desktop research was performed to assess habitats, special-status plant and wildlife species, identify jurisdictional features that may occur within the Project impact area, identify critical habitat and wildlife corridors that may occur in and near the Project site, and to identify and review local or regional plans, policies, and regulations that may apply to the Project site.

A habitat assessment of the Project site and a 500-foot buffer was assessed for special status species including Joshua tree (*Yucca brevifolia*), western burrowing owl (*Athene cunicularia)*, Mohave ground squirrel (*Xerospermophilus mohavensis*), and desert tortoise (*Gopherus agassizii*). The Biological Resources Assessment Report includes a compendium of all plants and animals observed during the site visits from April through July of 2022.

Focused surveys were conducted during the breeding season for burrowing owl (April, June, July, and August 2022). Burrowing owl was absent from the Survey Area at the time of the

surveys. No additional scat, pellets, or other sign was observed near the burrows or anywhere within the Survey Area to indicate occupation. As suitable habitat does exist at the Project Site a 14-30 day preconstruction survey for this species is required per Mitigation Measure **BIO-3**. Mitigation Measure **BIO-3** will ensure that burrowing owl have not occupied the site since the focused surveys were conducted during the 2022 breeding season.

Focused surveys were conducted for Mohave ground squirrel with a total of three trapping sessions which occurred during April, May, and June 2022. Mohave ground squirrel was not captured during the protocol level sessions and is not expected to occur at the Project site. Implementation of the Project will not result in the loss of individual Mohave ground squirrel, nor will Project development adversely affect local or regional populations of these species.

Focused surveys for desert tortoise were performed during April 2022. During the focused surveys no sign (scat, burrows, etc.) of this species was noted and this species is not expected to occur at the Project Site. Implementation of the Project will not result in the loss of individual desert tortoise, nor will Project development adversely affect local or regional populations of these species.

The Project site is undeveloped and has been disturbed by grading. The vegetation is growing and is of small stature where grading has occurred in the past. The Survey Area is dominated by disturbed native vegetation, ruderal species, and friable soils. Wildlife diversity during the field survey was generally low, likely due to the low diversity of the plant assemblage. The commonly observed species within the Survey Area were mourning dove (*Zenaida macroura*) and common raven (*Corvus corax*).Vegetation on site consists of Larrea tridentata-Ambrosia dumosa Shrubland Alliance with dominant species being white bursage (*Ambrosia dumosa*), creosote bush (*Larrea tridentata*) and Mexican tea (*Ephedra trifurca*), and Joshua tree (*Yucca brevifolia*).

Casc's biologist performed an inventory of all Joshua trees within the Survey Area. A total of fifty-two (52) live Joshua trees and seven (7) dead Joshua trees were recorded during the April 27, 2022 site visit. This data is included in *Table 1. Western Joshua Tree Inventory* within the Biological Resource Assessment Report. Per CDFW requirements, each Joshua tree noted in *Table 1. Wester Joshua Tree Inventory* was photographed, general health assessment (height, branching, clonal, etc.) performed, and a GPS location of each tree was recorded.

Shrubs and Western Joshua tree located within the Survey Area provide nesting habitat for a number of nesting bird species. Several nests of cactus wren (*Campylorhynchus brumeicapillus*) were found during the site survey. Other avian species with potential to nest on the Project Site included mourning dove (*Zenaida macroura Calypte anna*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and house finch (Carpodacus mexicanus). Turkey vulture (*Cathartes aura*) was also noted during the survey and can utilize the site for foraging and thermoregulation. Black-tailed jackrabbit (*Lepus californicus*) is expected to nest and forage on site. And coyote (*Canis latrans*) was observed foraging as evidenced by the presence of sign (scat and tracks).

With incorporation of Mitigation Measures **BIO-1** through **BIO-5**, direct or indirect impacts through habitat modifications on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service would be less than significant.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact with Mitigation Incorporated: The Joshua tree is a candidate species in the initial stages of consideration for listing as endangered under the California Endangered Species Act (CESA) (Office of Administrative Law's Notice ID #Z2019-1112-01 and Z2020-0924-01 Petition to list Western Joshua Tree (*Yucca brevifolia*) as an Endangered Species). Therefore, the incorporation of Mitigation Measures **BIO-1** (Incidental Take Permit from CDFW) and **BIO-2** (Desert Native Plant Protection and Relocation Plan) will reduce potential impacts to a less-than-significant level.

c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact: The Biological Resource Assessment Report states there is no riparian vegetation within the Project site boundary or in the adjacent buffer areas (see Appendix C). No ephemeral drainage channels, wetlands, or vernal pools were observed on the Project site during the survey. Development of the Project site as proposed would not result in impacts to riparian vegetation community because these resources do not occur on the Project site or within the area of project impacts. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact: The Biological Resource Assessment Report states there were no distinct wildlife corridors identified on the Project site or in the immediate area. Additionally, the Project site is not within an area that includes sensitive habitats (e.g., wetlands, vernal pools, critical habitats for sensitive species, etc.). The proposed Project is not anticipated to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites since the site does not include disturbances to any sensitive areas. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant Impact with Mitigation Incorporated: During October 2020, CDFW proposed the Joshua tree as a candidate threatened species. As a candidate species, the Joshua tree must be evaluated as a threatened species. On October 15, 2020, the County of San Bernardino released a statement regarding Joshua tree preservation. Due to the CDFW listing, the County cannot issue a permit to take (by removal of transplanting) any Joshua tree (sbcounty.gov). Therefore, the Project proponent shall apply for an Incidental Take Permit (ITP) through CDFW. The Project shall also comply with the City's Municipal Code (Chapter 16.24) requiring Joshua tree preservation. Thus, with Municipal Code compliance and the incorporation of Mitigation Measures **BIO-1** (Incidental Take Permit from CDFW) and **BIO-2** (Desert Native Plant Protection and Relocation Plan),

Project impacts will be reduced to less than significant.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact: The General Plan does not identify the Project site, nor the vicinity to be within a Habitat Conservation Plan (HCP) and will not conflict with the provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional or State HCP since there is no adopted HCP or NCCP in the Project area or local region. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

Mitigation Measures

Mitigation:

(a,b,e)

BIO-1: Incidental Take Permit from CDFW

Mitigation for direct impacts to the Western Joshua Trees within the Project Site shall be fulfilled through attainment of a Western Joshua Tree Conservation Act (WJTCA) Incidental Take Permit. An Incidental Take Permit (ITP) application and supporting documentation shall be submitted to CDFW for review and approval for removal of Western Joshua trees on the Project site. An ITP establishes a performance standard requiring that the impacts be "minimized and fully mitigated" with "measures that are roughly proportional in extent to the impact of the authorized taking on the species." Therefore, additional mitigation measures, such as the purchase of credits from an approved conservation or mitigation bank, land acquisition, or entry into a conservation easement, will be determined in consultation with CDFW to meet ITP requirements.

A completed application requires a completed CEQA document to accompany the ITP application and fee. CDFW requires the CEQA document to have a state clearing house number, show proof of filing fees, and that the document has been circulated. CDFW will then review the ITP and CEQA document and make a determination of mitigation.

(a,b,e)

BIO-2: Desert Native Plant Protection and Relocation Plan

A Desert Native Plant Protection and Relocation Plan (Plan) for the proposed Project shall be composed that will provide detailed specifications for the proposed treatment, avoidance, or relocation of all smoke trees (Cotinus sp.), species in the Agavacea family, mesquite (Prosopis sp.), large creosote bushes (Larrea sp.), Western Joshua trees, and any other plants protected by the State Desert Native Plant Act. Further, the Protected Desert Plant Plan will provide measures to meet the requirements of Chapter 16.24 of the City if Hesperia's (City) Municipal Code to protect, preserves, and mitigate impacts to Western Joshua tree. The City's Protected Plan Policy (HMC 16.24) states the following for commercial and industrial projects:

- The Plan shall be certified by an arborist or registered botanist.
- An application and fee shall be completed and paid to the City of Hesperia.

- Healthy, transplantable Western Joshua trees shall be relocated on-site or may be placed in an adoption program.

The Desert Native Plant Protection and Relocation Plan will address requirements of the City's Protected Plant Policy and provide details from the initial survey of the site's Western Joshua trees and other sensitive desert plant species, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees or bushes requiring removal and relocation. Specifically, the Plan will include site location and characteristics; relocation requirements including Western Joshua tree and other sensitive desert plant species report and removal/relocation and transplanting specifics; success criteria and associated necessary fees, protective measures prior to, during and after construction, and maintenance after construction.

(a)

BIO-3: Pre-Construction Western Burrowing Owl Clearance Surveys

In accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012), two (2) pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. Once surveys are completed, the qualified biologist shall prepare a final report documenting surveys and findings. If no burrowing owls or occupied burrows are detected, Project construction activities may begin. If an occupied burrow is found within the Project Site during pre-construction clearance surveys, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to the County, which may consult with CDFW for review, prior to initiating Project construction activities.

(a)

BIO-4: Passive and Active Relocation of Western Burrowing Owls

If Western burrowing owls are observed on the Project site during preconstruction surveys, CDFW shall be immediately notified to determine if avoidance of the nest is appropriate until the nest is vacated or to gain concurrence from CDFW on active or passive relocation actions. All passive or relocation activities shall be in concurrence with CDFW guidelines (Staff Report on Burrowing Owl Mitigation 2012).

If burrowing owls are present and nesting on-site the following steps shall be necessary to reduce impacts to less than significant. These steps may be augmented by recommendations from CDFW:

a. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that: (1) owls have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

b. A qualified biologist shall exclude all owls from active burrows using one-way doors. Concurrently, all inactive burrows and other sources of secondary refuge for burrowing owls shall be collapsed and removed from the site.

c. Following and 24 to 48-hour observation period, all vacated burrows shall be collapsed.

d. A qualified biologist shall conduct a post-exclusion survey confirming the absence of burrowing owls on the Project site. Should newly occupied burrows be discovered on the Project site the exclusion activities shall be repeated.

(a)

BIO-5: Nesting Bird Preconstruction Surveys

If it is not feasible to avoid the nesting bird season (typically January through July for raptors and February through August for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or directly adjacent to the Project site. If active nests are located, the extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, the nesting bird survey shall occur no earlier than seven (7) days prior to the commencement of construction.

In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Cultural Resources – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those outside of formal cemeteries?	☐	☒	☐	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Conservation Element
    b. Appendix D: Cultural Resources
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.5 – Cultural Resources
3. Title 16 – Development Code of the Hesperia Municipal Code
    a. Section 16.12.150 Application for planned development
4. Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project, City of Hesperia, San Bernardino County, California. Duke Cultural Resources Management, LLC. September 23, 2022. (Appendix D)

Discussion of Impacts

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant in §15064.5 of the CEQA Guidelines?

Less than Significant Impact: A Cultural and Paleontological Resources Assessment was prepared by Duke Cultural Resources Management, LLC (Duke CRM) dated September 23, 2022 (Appendix D). On September 12, 2022, Duke CRM staff performed a records search. The records search included a review of all recorded cultural resources within a ½ mile radius of the Project, as well as a review of known cultural resource survey and excavation reports. The records search identified three (3) cultural resources within ½ mile of the Project, none of which are located within the current Project area. Resource P-36-0021351 is the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR)-eligible California Aqueduct, located 670 feet from the southwest corner of the Project. Resource P-36-021288, located 2,400 feet northeast of the Project area, is a mid-20th century trash deposit consisting primarily of cans for which CRHR eligibility has not been determined. P-36-021366 is a mid-20th century trash scatter for which CRHR eligibility has not been determined.

On July 27, 2022, Duke CRM archaeologist conducted an intensive pedestrian field survey of the Project area. No cultural or paleontological resources were observed during the field survey. The Project site consisted of little to no vegetation with scattered debris and a motocross track established on the eastern half of the Project area. As a result of negative findings during the South Central Coastal Information Center (SCCIC) records search and field survey, Duke CRM finds that the Project has a low potential to impact cultural resources.

The Project site is currently vacant and there are no known historically or culturally significant resources, structures, buildings, or objects located within the Project area. The Project site does not contain any previously recorded cultural and/or paleontological resources. In addition, the property has been disturbed by grading and motor vehicle use on the site. Thus, the Project site would not cause an adverse change in the significance of a historical resource and impacts to historic resources would be less than significant.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the CEQA Guidelines?

Less than Significant Impact with Mitigation Incorporated: As concluded in the Cultural and Paleontological Resources Assessment prepared by Duke CRM (Appendix D), the Project area does not contain previously recorded cultural and/or paleontological resources. In addition, the property has been disturbed by grading and motor vehicle use on the site. Although, it is not anticipated that unknown cultural resources exist on-site, Mitigation Measure **CUL-1** is identified to ensure that in the event that unanticipated resources are encountered during grading activities, potential impacts would remain less than significant. In the event archeological resources are discovered, grading activities must cease, a qualified archeologist must be consulted, and all discoveries must be documented accordingly. Implementation of the Project is not anticipated to result in a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5 of the CEQA Guidelines. A less than significant impact with mitigation incorporated would occur.

c) Disturb any human remains, including those outside of formal cemeteries?

Less than Significant Impact with Mitigation Incorporated: Duke CRM conducted a review of online historical aerial photographs and historical USGS quad maps utilizing University of California, Santa Barbara Frame Finder, historicaerials.com, and USGS Historical Topographic Map Explorer. Review of the images dating back to 1902 did not identify possible formal or informal cemeteries in the area. Therefore, a low likelihood exists that human remains could be uncovered during ground-disturbing activities. However, these findings do not preclude the existence of previously unknown human remains located below the ground surface, which may be encountered during construction excavations associated with the proposed Project. As a result, Mitigation Measure **CUL-1** has been identified to reduce potentially significant impacts to previously unknown human remains that may be unexpectedly discovered during project implementation to a less than significant level. Consistent with State law, if at any time during grading human remains are found, the Project is to be conditioned to halt work and contact the San Bernardino County Coroner's Office. Based on compliance with existing regulations and the implementation of Mitigation Measure **CUL-1**, the Project's potential to disturb human remains is considered less than significant with mitigation.

Mitigation Measures

Mitigation:

(b,c)

CUL-1: Inadvertent Finds

In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease. A qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards shall be retained to assess the significance of the find. Work may continue on other portions of the Project site outside the buffered area during this assessment. If the discovery is determined to be of Native American origin, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as outlined in TCR-1, and provided information following the archaeologist's initial assessment to allow for Tribal input on the significance and recommended treatment of the resource.

CUL-2: Monitoring Plan

If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

CUL-3: Human remains discovery

If human remains or funerary objects are encountered, all work shall stop in the area (within a 100-foot buffer of the find) and the County Coroner must be notified immediately in accordance with California Health and Safety Code Section 7050.5. No further disturbance shall occur until the Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be prehistoric, the Coroner shall notify the Native American Heritage Commission (NAHC), which will identify and notify the Most Likely Descendant (MLD). With permission of the landowner or authorized representative, the MLD may inspect the site and shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of the remains and any associated items.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Energy – Would the project:				
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Conservation Element
2. City of Hesperia Climate Action Plan, July 20, 2010.
3. Amargosa and Palmetto High-Cube Warehouse Energy Analysis City of Hesperia. Urban Crossroads, Inc. February 1, 2023. (Appendix E)

Discussion of Impacts

a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact: The proposed Project would impact energy resources during construction and operation. The construction activities for the Project would include site preparation, grading, building construction, paving, and architectural coating. The Project would consume energy resources during construction in three (3) general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment on the Project site, construction worker travel to and from the Project site, as well as delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities);
2. Electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and,
3. Energy used in the production of construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Urban Crossroads prepared an Energy Analysis dated February 1, 2023, to quantify anticipated energy usage associated with construction and operation of the Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

Construction Related Impacts

Construction of the Project would result in fuel consumption from construction tools and equipment, vendor and haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. Construction activities and corresponding fuel energy consumption would be temporary and localized. Construction equipment used by the Project would result in single event consumption of approximately 41,845 gallons of diesel fuel (Appendix E). There are no unusual Project characteristics that would cause construction equipment to be less energy efficient compared with other similar construction sites in other parts of the State. Additionally, Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

Operational Related Impacts

Project facility operational energy demands are estimated at 9,499,636 kBTU/year of natural gas and 2,457,929 kWh/year of electricity. Natural gas would be supplied to the Project by SoCalGas, and electricity would be supplied by SCE. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other industrial uses of similar scale and configuration.

The Project includes the implementation of sidewalks, facilitating and encouraging pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the California Green Building Standards Code and City requirements, the Project would promote the use of bicycles as an alternative means of transportation by providing short-term and/or long-term bicycle parking accommodations. Additionally, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

As supported by the preceding, Project construction and operations would not result in the inefficient, wasteful, or unnecessary consumption of energy. Further, based on the results of the Energy Analysis, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy-producing or energy transmission facilities. The Project would not create or otherwise result in a potentially significant impact affecting energy resources or energy delivery systems, a less than significant impact would occur.

b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?

Less Than Significant Impact: The applicable state plans that address renewable energy and energy efficiency are CALGreen, the California Energy Code, and California's Renewable Portfolio Standard. Under the California Renewables Portfolio Standard, the State of California is transitioning to renewable energy through the California's Renewable Energy Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. Electricity production from renewable sources is generally considered carbon neutral. Executive Order S-1408, signed in November 2008, expanded the state's renewable portfolios standard (RPS) to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45

percent by 2027, and 50 percent by 2030. Senate Bill 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures. On September 10, 2018, Governor Brown signed SB 100, which supersedes the SB 350 requirements. Under SB 100, the RPS for public owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Additionally, SB 100 also established a new RPS requirement of 50 percent by 2026. The bill also established a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under SB 100 the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

The statewide RPS goal is not directly applicable to individual development projects, but to utilities and energy providers such as SCE, which is the utility company that would provide all electricity needs for the Project. Additionally, the Project would comply with the Building Energy Efficiency Standards (Title 24) and CALGreen. Therefore, implementation of the Project would not conflict or obstruct plans for renewable energy. Thus, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Geology and Soils– Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Safety Element

2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.6 – Geology and Soils
3. Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project, City of Hesperia, San Bernardino County, California. Duke Cultural Resources Management, LLC. September 23, 2022. (Appendix D)
4. Geotechnical Investigation Proposed Warehouse NWC Palmetto Way and Amargosa Road Hesperia, California. Southern California Geotechnical, Inc. July 18, 2022. (Appendix F)

Discussion of Impacts

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.

Less than Significant Impact: The Alquist-Priolo Earthquake Fault Zoning Act (Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act requires the State Geologist to establish regulatory zones, known as "Alquist-Priolo (AP) Earthquake Fault Zones," around the surface traces of active faults and to issue appropriate maps. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (typically 50 feet).

Neither the site nor any area within the jurisdictional boundaries of the City are within an Alquist-Priolo Earthquake Fault Zone. The Project site is not included within any Earthquake Fault Zones as created by the Alquist-Priolo Earthquake Fault Zoning Act. A Geotechnical Investigation was prepared by Southern California Geotechnical (SCG), dated July 18, 2022. SCG did not identify any evidence of faulting during geotechnical investigations. Additionally, the San Andreas Fault is the closest identified Alquist-Priolo Earthquake Fault Zone to the Project site, approximately 12 miles southeast of the site. As there are no known faults located on the Project site and there is no evidence of faulting, the potential for the proposed Project to expose people or structures to adverse effects related to ground rupture is nil. Therefore, a less than significant impact would occur.

ii. Strong seismic ground shaking?

Less than Significant Impact: The Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. However, as stated under section (i) above, the Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The ground shaking risk is not considered substantially different than that of other properties within the City. As a mandatory condition of Project approval, the City will require that the proposed structures be constructed in accordance with the 2019 California Building Code (CBC), Title 24, and the City Building Code, which are

designed to preclude significant adverse effects associated with strong seismic ground shaking. The future buildings and workers on the Project site have the potential to be exposed to strong seismic ground shaking associated with seismic events. Adherence to the recommendations outlined in the City's General Plan and Municipal Code, as well as conditions of approval and the 2019 California Building Code (CBC) Guidelines that are currently adopted by the City, will ensure potential impacts related to strong seismic shaking are less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact: Liquefaction is a phenomenon associated with shallow groundwater combined with the presence of loose, fine sands, and/or silts within a depth of 50-feet below grade or less. Liquefaction occurs when saturated, loose, fine sands and/or silts are subjected to strong ground shaking resulting from an earthquake event. Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. Increasing duration of the ground shaking during a seismic event can also increase the potential for liquefaction.

Based on review of the City's General Plan Seismic Hazard Zones map, the Project site is not located within a designated zone of liquefaction susceptibility. Additionally, the site is underlain by moderate to high strength alluvium, and the lack of a historic high groundwater table within the upper 50± feet. Therefore, liquefaction is not considered to be a design concern for the Project (Appendix F), a less than significant impact would occur.

iv. Landslides?

Less than Significant impact: Seismically induced landslides and slope failures are common occurrences during or soon after large earthquakes. According to City's General Plan Seismic Hazard Zones map, the Project site is not located within an area that has potential for earthquake-induced landslides. Additionally, the Project site and surrounding areas are relatively flat. Project implementation would not directly or indirectly induce risk of landslide, a less than significant impact would occur.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact: Construction activities associated with the Project would involve earth movement and the exposure of soil, which would temporarily increase erosion susceptibility. In the long-term, development of the subject property would increase impervious surface cover and permanent landscaping on the Project site, thereby reducing the potential for erosion and loss of topsoil that currently occurs. The Project would be required to adhere to standard regulatory requirements, including, but not limited to, requirements of the City's National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which requires adoption of an appropriate Storm Water Pollution Prevention Plan (SWPPP) and implementation of Best Management Practices (BMPs) to reduce erosion from storm water runoff. Based on the preceding, potential impacts associated with erosion or changes in topography, including loss of topsoil are considered less than significant.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact with Mitigation Incorporated: Based on a lack of documentation regarding the placement and compaction of the existing fill materials, the soils of the Project site are considered to consist of undocumented fill. Therefore, the fill soils in their present condition are not suitable for the support of the foundation loads of the proposed building. The fill soils are underlain by native alluvium which possesses varying strengths and densities. The results of laboratory testing indicate that the near-surface soils within the upper 5 to 6± feet possess a potential for moderate to severe collapse when exposed to moisture infiltration as well as moderate consolidation when exposed to load increases in the range of those that will be exerted by the new foundations (Appendix F).

The Project will be required to comply with all requirements and recommendations outlined in the Geotechnical Investigation prepared by Southern California Geotechnical, as required by Mitigation Measure **GEO-1**. Furthermore, the Project will comply with all applicable provisions of the Uniform Building Code (UBC) and California Building Code (CBC) that would act to minimize any unstable soils or unstable geologic units that may be encountered. On this basis, the potential for the Project to be located on a geologic units or soil that is unstable, or that would become unstable as a result of the Project and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse is less than significant with mitigation incorporated.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant Impact: Expansive soils contain significant amounts of clay particles that swell considerably when wet and shrink when dry. Foundations constructed on these soils are subject to uplifting forces caused by swelling. Without proper mitigation measures, heaving and cracking of both building foundations and slabs-on-grade could result. Laboratory testing performed on a representative sample of the near surface soils indicates that these materials are considered to be non-expansive. Therefore, no design considerations related to expansive soils are considered warranted for the Project site (Appendix F). The subsurface soils at the site are considered non-expansive and a less than significant impact would occur.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste-water disposal systems where sewers are not available for the disposal of waste water?

No Impact: The Project site is serviced by the City of Hesperia Water District for potable water and sewage. The Project does not propose to utilize a septic tank or alternative wastewater disposal system. Therefore, no impact will occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact with Mitigation Incorporated: A Cultural and Paleontological Resources Assessment was prepared by Duke Cultural Resources Management, LLC (Duke CRM) dated September 23, 2022 (Appendix D). Duke CRM requested that the Western

Science Center (WSC) perform a paleontological records search for known fossil localities within, and in the vicinity of, the Project site. On May 27, 2022, the WSC found that there have been no paleontological resources discovered within the Project area or within a one (1) mile search radius. However, significant fossils have been discovered in similar sediments in other areas of southern California.

The Project is located on Pleistocene age (Qa) sediments. Research indicates that there is a high sensitivity for paleontological resources in the old alluvial deposits that underlie the Project site. Therefore, significant and unique paleontological resources may be impacted by the Project during earth disturbing activities in this area. Mitigation Measure **GEO-2** will ensure that paleontological monitoring is conducted where ground disturbance exceeds four (4) feet below surface within the Project site, which reduces the potential for impacts to paleontological resources to a level that is less than significant under CEQA.

Mitigation Measures

Mitigation:

VII. (c)

GEO-1: **Grading and Construction**
The Project shall incorporate the recommendations provided in the Geotechnical Investigation prepared by Southern California Geotechnical, dated July 18, 2022 (Appendix F). The recommendations are presented in the following sections of the report: Site Grading Recommendations, Construction Considerations, Foundation Design and Construction, Floor Slab Design and Construction, Retaining Wall Design and Construction, and Pavement Design Parameters.

(f)

GEO-2: **Paleontological Monitoring**
A paleontological monitor shall be present during ground disturbing activities below four (4) feet in depth within the Project. The monitor shall work under the direct supervision of a qualified paleontologist (B.S./B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated competence in paleontological research, fieldwork, reporting, and curation).

1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
2. The paleontological monitor shall be present full-time during ground disturbance below 4 feet in depth within the Project, including but not limited to grading, trenching, utilities, and off-site easements. If, after excavation begins, the qualified paleontologist determines that the sediments are not likely to produce fossil resources, monitoring efforts shall be reduced.
3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered.
4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.

5. In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly mapped, documented, removed, and the area cleared.
6. If the discovery is significant the qualified paleontologist shall notify the CLIENT and CITY immediately.
7. In consultation with the CLIENT and CITY the qualified paleontologist shall develop a plan of mitigation which will likely include full-time monitoring, salvage excavation, scientific removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Greenhouse Gas Emissions – Would the project:				
a) Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Conservation Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.17 – Greenhouse Gases
3. California's 2017 Climate Change Scoping Plan, prepared by the California Air Resources Board, November 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf
4. City of Hesperia Climate Action Plan, July 20, 2010. Accessed online at Microsoft Word - 23660023 Hesperia CAP.doc (cityofhesperia.us)
5. Amargosa and Palmetto High-Cube Warehouse Greenhouse Gas Analysis City of Hesperia. Urban Crossroads, Inc. February 1, 2023. (Appendix G)

Discussion of Impacts

a) Generate greenhouse gas emissions either directly or indirectly, that may have a significant impact on the environment?

Potentially Significant Impact: Urban Crossroads conducted a Greenhous Gas Analysis for the proposed Project, dated February 1, 2023. The analysis provides the estimated GHG emissions that will result from Project construction and operation. Construction related GHG emissions are quantified and amortized over the life of the Project, which is identified as a 30-year period, in accordance with the MDAQMD which follows the South Coast Air Quality Management District (SCAQMD) recommendation. Project operational emissions would consist of mobile source emissions, area source emissions, energy source emissions, on-site cargo handling equipment emissions, solid waste management, and water supply, treatment, and distribution.

On July 20, 2010, the City of Hesperia adopted the Climate Action Plan (CAP), which provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate. The CAP recommends GHG emissions targets that are consistent with the reduction targets of the State of California and presents a number of strategies that will make it possible for the City to meet the recommended targets.

Prior to the implementation of current regulatory requirements, Project GHG emissions would total approximately 5,793.17 MTCO2e per year. However, after implementation of current regulatory requirements, Project GHG emissions would total approximately 4,894.17 MTCO2e per year. The Project GHG emissions estimates presented in Table 8-1 reflect contemporary GHG emissions regulatory actions enacted subsequent to adoption of the City's 2010 CAP. These regulatory actions (notably implementation of the Renewables Portfolio Standard) would yield an approximate 9% reduction in Project GHG emissions from sources other than vehicles. An additional 7% reduction in GHG emissions (primarily from vehicular/mobile sources) would be achieved through on-going implementation of the Pavley Fuel Efficiency Standards. These measures, which are not reflected in the CAP, would reduce Project GHG emissions by approximately 16% (Appendix G).

Table 9-1 Project Net Greenhouse Gas Emissions with Implementation of Current Regulatory Requirements

Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2E
Annual construction-related emissions amortized over 30 years	28.93	1.00E-03	1.33E-03	2.50E-02	29.37
Mobile Source	2,895.00	0.06	0.25	4.43	2,975.00
Area Source	7.30	< 0.005	< 0.005	0.00	7.51
Energy Source	893.00	0.08	0.01	0.00	896.00
Water Source	146.00	3.77	0.09	0.00	267.00
Waste Source	41.91	4.19	0.00	0.00	147.00
On-Site Equipment Source	0.00	0.00	0.00	0.00	572.30
Total CO_2E (All Sources)	**4,894.17**				

The Project has the potential to generate a total of approximately 4,894.17 MTCO2e/yr, after control measures as summarized on Table 8-1, and meets the City's CAP target of a 12% reduction. While the City has not formally adopted a numeric significance threshold, it has previously relied on the SCAQMD-recommended threshold of 3,000 MTCO2e per year to evaluate whether a project may result in a significant GHG impact under CEQA. The SCAQMD, as the expert air quality agency in Southern California, provides substantial evidence that this threshold is consistent with State policy goals and 2050 GHG reduction targets, capturing approximately 90% of emissions from similar land uses, consistent with Executive Order S-3-05's goal of reducing GHG emissions to 80% below 1990 levels by 2050. This threshold applies to residential, commercial, and industrial projects, including warehouses and industrial parks (SCAQMD 2008).

Because the Project's estimated GHG emissions (4,894.17 MTCO2e per year) exceed the SCAQMD 3,000 MTCO2e/year threshold, the Project would be considered to have the potential to result in a significant GHG impact. This impact will be further analyzed in the Draft Environmental Impact Report (DEIR), and Appendix G will be updated to include detailed SCAQMD threshold analyses. Compliance with the CAP, while reducing emissions, does not eliminate the need for this additional analysis.

An individual project cannot generate enough GHG emissions to influence global climate change. The project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of GHGs, which when taken together may have a significant impact on global climate change... The project exceeds the SCAQMD thresholds and therefore impacts are potentially significant and will be studied further in the Project's EIR.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Potentially Significant Impact: The Project exceeds the SCAQMD-recommended threshold of 3,000 MTCO2e per year. Therefore, the Project has the potential to result in a significant GHG impact. This impact will be further analyzed in the Draft Environmental Impact Report (DEIR), and the Greenhouse Gas Analysis (Appendix G), will be updated to include a detailed analysis of the Project relative to the SCAQMD threshold.

Mitigation Measures

Mitigation:

Mitigation measures will be evaluated in the Project's DEIR.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hazards and Hazardous Materials – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Safety Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.

a. 3.7 – Hazards and Hazardous Materials
3. Hazard Mitigation Plan, City of Hesperia, 2017. Accessed online at 2017-Hazard-Mitigation-Plan (cityofhesperia.us)
4. City of Hesperia Emergency Plan, September 12, 2008. Accessed online at Microsoft Word - 2008 EOP.docx (cityofhesperia.us)
5. Envirostor, Department of Toxic Substances Control, 2019. https://www.envirostor.dtsc.ca.gov/public/
6. Heliports in California, United States of America. Accessed online on January 11, 2023 https://www.airnav.com/airports/us/CA?type=H&use=R
7. FHSZ Viewer, The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP), accessed January 11, 2023. https://egis.fire.ca.gov/FHSZ/

Discussion of Impacts

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact: Project implementation would not cause routine transport, use, or disposal of hazardous materials. However, equipment used and stored at the site during Project construction and operation will utilize substances considered to be hazardous by regulatory bodies, such as diesel fuel and gasoline. These types of materials are not acutely hazardous, and all storage, handling, use, and disposal of these materials are regulated by federal and state requirements. Project construction and operational activities are required to strictly adhere to federal and state requirements. The use, transport, storage, and disposal of hazardous materials must comply with existing regulations established by several agencies, including the Department of Toxic Substances Control (DTSC), the U.S. Environmental Protection Agency (EPA), the US Department of Transportation (USDOT), the Occupational Safety & Health Administration (OSHA), the California Code of Regulations (CalOSHA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The amount of hazardous material discharge during construction is expected to be less than significant, and the Project would be required to comply with applicable laws, ordinances, and procedures. Thus, Project impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact: As discussed in Section IX(a), any handling activities associated with hazardous or potentially hazardous materials would comply with all applicable federal, state, and local agencies and regulations. Both short-term construction and long-term operation of the proposed Project would comply with all applicable federal, State, and local agencies and regulations with the policies and programs established by agencies such as the EPA, Department of Transportation, Department of Toxic Substances Control, Cal/OSHA, Resource Conservation and Recovery Act (RCRA), and the state Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. Adherence to the applicable policies and programs of these agencies would

ensure that any transport or interaction with hazardous materials would occur in the safest possible manner, reducing the opportunity for the accidental release of hazardous materials into the environment. Any handling of hazardous materials would be limited in both quantities and concentrations. Based on the preceding, impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact: The closest schools to the Project site are Topaz Preparatory Academy approximately 1.0 mile east of the site, Mirus Secondary School approximately 1.3 miles southeast of the site, and Maple Elementary School approximately 1.5 miles northeast of the site. As previously discussed, handling activities associated with hazardous or potentially hazardous materials would comply with all applicable federal, state, and local agencies and regulations. Project construction and operation is anticipated to handle and use diesel fuel and gasoline. Any handling of hazardous materials would be limited in both quantities and concentrations. Given that there are no schools within one-quarter mile of the proposed Project, no impact would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact: Government Code Section 65962.5 describes that before an application for a development project is completed, the Applicant and/or Lead Agency shall indicate whether the site is included on any of the lists compiled pursuant to that section and identify which list(s). According to the Cortese List (DTSC, EnviroStor 2019), the Project site is not included on a list of hazardous materials sites. Nor are there any hazardous materials sites listed in the vicinity of the Project site. Therefore, the proposed Project would not create a significant hazard and no impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact: The nearest airport is Hesperia Airport approximately 5.3 miles southeast of the site. The Project site is not within an airport influence area or safety zone. Given the Project site's distance from any airport, the Project will not create a safety hazard or excessive noise for people residing or working in the Project area. Thus, no impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact: The City adopted its Hazard Mitigation Plan (HMP) in 2017. The HMP requires the proposed Project to comply with the City's Emergency Operations Plan. The Project site and immediate surroundings do not contain emergency shelters or facilities. Additionally, the Project does not involve construction or operational

characteristics which would interfere or impact emergency response or evacuation of the Project site or immediate surrounding area. Egress and ingress to the Project site will be maintained and circulation on-site is provided to comply with County and City requirements. Therefore, potential impacts to the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan would be less than significant and no mitigation would be required.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than Significant Impact: Impacts associated with wildland fires are also addressed in Section XX, *Wildfire,* of this Initial Study. The potential for wildland fires represents a hazard, particularly within areas adjacent to open space or within close proximity to wildland fuels. The proposed Project would remove the sparse desert vegetation that currently occupies the Project site. Additionally, the Project would comply with the California Fire Code. The San Bernardino County Fire Station 305 is located approximately 2.7 southwest of the Project site. Compliance with the San Bernardino County Fire Department's regulations and policies would ensure that the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Hydrology and Water Quality – Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Conservation Element
    b. Open Space Element
    c. Safety Element
2. Hesperia Main Street and Freeway Corridor Specific Plan, amended July 15, 2021.

    a. Chapter 14 Open Space and Streetscape Improvements
3. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.8 – Hydrology and Water Quality
4. Title 16 – Development Code of the Hesperia Municipal Code
    a. Section 16.40.050 Drainage and runoff control
5. FEMA Flood map Service Center, Federal Emergency Management Agency. Accessed January 13, 2023.
6. Hesperia Spec. Industrial, Industrial Buildings City of Hesperia, CA Preliminary Hydrology Report. WestLAND Group, Inc. July 2022. (Appendix H)
7. Conceptual Water Quality Management Plan for Hesperia Spec Industrial. WestLAND Group, Inc. July 13, 2022. (Appendix I)

Discussion of Impacts

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant Impact: In order to comply with the New Development and Redevelopment Standards of the Mojave River Watershed NPDES Permit (Phase II Small MS4 General Permit), a Conceptual Water Quality Management Plan (WQMP) was prepared by WestLAND Group, dated July 13, 2022 to determine the best capability of the Project to use BMPs to manage and capture stormwater runoff. With the implementation of the Stormwater Quality Control Measures outlined in the WQMP as approved by the City, the volume of stormwater runoff and potential pollution loads in stormwater runoff will be reduced to the maximum extent possible. The WQMP describes spill prevention, control and cleanup BMPs which reduce the potential for soil contamination and/or groundwater contamination.

Additionally, WestLAND Group prepared a Hydrology Report dated July 2022. The purpose of the Hydrology Report is to identify the mitigation measures that must be implemented during final design in order to ensure that the project does not have adverse impacts to downstream properties. Based on the report, the Project includes a combination of an at grade detention basin and underground infiltration basin to treat stormwater runoff. The proposed development provides enough volume to capture the entire runoff volume generated from a 100-year storm event and does not release any runoff off-site for up to a 100-year storm event. The Project conforms with conditions related to water quality standards and waste discharge requirements to reduce the potential to substantially degrade surface or groundwater quality. Thus, a less than significant impact would occur.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact: The Project site is serviced by the Hesperia Water District. Water supply is obtained entirely from groundwater located in the Alto Sub-Basin of the Mojave River Watershed and groundwater aquifer. The City's municipal water system extracts its water supply from the underground aquifers through 18 active groundwater wells located throughout the City. According to the Hesperia Water District 2020 Urban Water Management Plan (UWMP), Hesperia has reliable supplies to meet its retail customer demands in normal, single dry years, and five consecutive dry year conditions through 2045.

Development of the proposed Project would increase the amount of impervious surface on-site which could reduce the amount of water percolating down into the underground aquifer that underlies the Project site and a majority of the City. However, the Project's proposed drainage system implements the BMPs provided in the Hydrology Report and WQMP to ensure that Project impacts are less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) result in substantial erosion or siltation on- or off-site;

Less than Significant Impact: The proposed Project would not alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion or siltation on- or off-site. Project flows are collected through the nearest catch basin which is conveyed to infiltration/retention basins via a storm drain system. The storm drain system is designed to efficiently direct flow into infiltration/detention basins, as well as a single underground infiltration basin. The proposed Project conveys flows into the underground infiltration system and when filled, flows will be conveyed into the infiltration/retention basin. The proposed development provides enough volume to capture the entire runoff volume generated from a 100-year storm event and does not release any runoff off-site for up to a 100-year storm event (Appendix I). Therefore, a less than significant impact would occur.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or

Less than Significant Impact: As indicated in section i) above, the proposed Project includes a combination of above ground and underground infiltration/retention basins to capture Project runoff. Therefore, Project implementation would have a less than significant impact on surface runoff both on- and offsite.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact: The Project proposes enough volume to capture the entire runoff volume generated from a 100-year storm event and will not release any runoff off-site for up to a 100-year storm event. To store the volume, the development proposes a combination of above ground and underground infiltration/retention basins. Since the development will not release runoff off-site, the development will not negatively impact downstream conditions (Appendix H). Therefore, Project impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact: The Project site is not located in a flood hazard, tsunami, or seiche zone. The Pacific Ocean is located over 70 miles southwest of the Project site. Consequently, there is no potential for tsunamis to impact the Project. In addition, no steep hillsides subject to mudflow are located on or near the Project site. According to the City's General Plan, the Project site is not located within a dam inundation area and there is

no levee located within the vicinity of the Project site. There is no potential for inundation. Accordingly, the Project site has no potential to be impacted by seiches, mudflows, and/or tsunamis. No impact would occur.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact: A WQMP and Hydrology Report were prepared by WestLAND Group to determine the best capability of the Project to use BMPs to manage and capture stormwater runoff. With the implementation of the Stormwater Quality Control Measures outlined in the WQMP and Hydrology Report as approved by the City, the volume of stormwater runoff and potential pollution loads in stormwater runoff will be reduced to the maximum extent possible. The Project is designed to meet City regulations regarding construction and operation for the Project. Thus, the Project will comply with City water quality control plans and sustainable groundwater management plans to reduce impact to a less than significant impact level.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Land Use and Planning – Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Land Use Element
2. Hesperia Main Street and Freeway Corridor Specific Plan, amended July 15, 2021.
    a. Chapter 5 Land Use Districts
3. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.9 – Land Use Planning

Discussion of Impacts

Would the project:

a) Physically divide an established community?

No Impact: According to the City's General Plan, the Project site is designated as Regional Commercial (RC) and the proposed land use designation is Commercial/Industrial Business Park (CIBP). The Project site is currently vacant, and the surrounding areas include vacant land and residential uses to the north, vacant land and a utility building to the west, Amargosa Road and I-15 Freeway to the east, and a distribution warehouse to the south. Therefore, no established communities exist within the Project site, nor does the Project propose or require elements or operations that would divide an off-site community. Based on the preceding, the Project would not physically divide an established community and no impact would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact: The General Plan land use designation for the Project site is Regional Commercial (RC) and the proposed land use designation is Commercial/Industrial Business Park (CIBP). The Project is consistent with the land use designation of CIBP (with approval of a Conditional Use Permit, as discussed below). Approval of the proposed Specific Plan Amendment would eliminate any potential inconsistency between the proposed Project and the site's existing land use designation.

As the City's General Plan Land Use Map and the Zoning Map are the same, the existing zoning designation for the Project site is Regional Commercial (RC) and the proposed zoning designation is Commercial/Industrial Business Park (CIBP). Therefore, approval of the proposed Zone Change would eliminate any potential inconsistency between the proposed Project and the site's existing zoning (with approval of a Conditional Use Permit, as discussed below).

Among the permitted uses in the CIBP zone, warehousing and wholesale distribution centers are permitted at 200,000 square feet or less. Warehouses and wholesale distribution centers over 200,000 square feet are conditionally permitted. The Specific Plan states that the maximum gross floor area ratio in CIBP zone is 0.50. Additionally, maximum building height within the zone is 60 feet with the exception that building heights shall be limited to 45 feet within the portion of the site that falls within 100 feet of an adjacent residential zone. For properties that are located west of the Interstate 15, building height is limited to 60 feet at the front setback line, thereafter, height may be increased at the rate of 1 foot in height for every additional 3-foot increase in the front yard setback, up to a maximum building height of 150 feet (City of Hesperia 2021).

The Applicant proposes to construct up to a 499,714 square-foot industrial building and associated improvements, including loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater facilities, sidewalks, and landscape area, which would require a Conditional Use Permit. As part of the Project approvals, the Project Applicant is requesting approval of a Conditional Use Permit. Assuming that the City's decisionmakers approve the Conditional Use Permit, the Project would be an allowable use within the CIBP zone. Additionally, the Project plans would be reviewed by City staff to ensure consistency with all applicable development standards and regulations. Therefore, implementation of the proposed Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Mineral Resources – Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Open Space Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    b. 3.10 – Mineral Resources
3. California Department of Conservation, Mineral Land Use Classification. Accessed January 16, 2023.

Discussion of Impacts

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

a-b) No Impact: According to the California Department of Conservation, Mineral Land Classification map, the Project site is part of the 1993 Open File Report (OFR) 92-06 and the 1994 OFR 94-07. However, the Project site is not located within an area known to be underlain by regionally- or locally-important mineral resources, as disclosed by the City's General Plan and the associated General Plan DEIR (City of Hesperia, 2010, p. 3.10-3). Furthermore, the Project site is not located in a Significant Mineral Aggregate Resource Area (SMARA). Accordingly, implementation of the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State of California. Additionally, there are no resource recovery sites delineated within the City boundaries, Project vicinity, or surrounding areas. Therefore, the proposed Project would not result in the loss of availability of locally important mineral resources and no impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Noise – Would the project result in:				
a) Generation of a substantial, temporary, or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Noise Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.11 – Noise
3. Title 16 – Development Code of the Hesperia Municipal Code
    a. Section 16.20.125 Noise
4. Amargosa and Palmetto High-Cube Warehouse Noise Impact and Vibration Analysis City of Hesperia. Urban Crossroads, Inc. January 27, 2023. (Appendix J)

Discussion of Impacts

Would the project result in:

a) Generation of a substantial, temporary, or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact: The Project includes approximately 10,000 square feet of office space, 489,714 square feet of industrial/warehouse space, and 255,000 square feet of landscape improvements. In total, the proposed Project includes 72 loading dock positions, 256 tractor-trailer stalls, and 251 passenger vehicle parking spaces. The Project will produce noise levels that are associated with construction and industrial activities. Urban Crossroads prepared a Noise Impact and Vibration Analysis dated January 27, 2023

(Appendix J). The Noise Impact and Vibration Analysis was prepared to satisfy applicable City of Hesperia standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines.

Construction Related Impacts:
The City's Municipal Code Section 16.20.125, *Noise,* states that construction activities are limited to the hours of 7:00 a.m. to 7:00 p.m. on any day and at any time on Sundays and federal holidays. Neither the City of Hesperia General Plan or County Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA Leq as a reasonable threshold for noise sensitive residential land use (Appendix J).

Construction noise levels will vary due to each stage of construction requiring a specific equipment mix, depending on the work to be completed. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. Project construction activities are expected to occur in the following stages: site preparation, grading, building construction, paving, and architectural coating. Table 14-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time.

Table 14-1 Construction Reference Noise Levels

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA L_{eg})	Combined Noise Level (dBA L_{eg})	Combined Sound Power Level (PWL)
Site Preparation	Crawler Tractors	78	80	112
	Hauling Trucks	72		
	Rubber Tired Dozers	75		
Grading	Graders	81	83	115
	Excavators	77		
	Compactors	76		
Building Construction	Cranes	73	81	115
	Tractors	80		
	Welders	70		
Paving	Pavers	74	83	115
	Paving Equipment	82		
	Rollers	73		
Architectural Coating	Cranes	73	77	109
	Air Compressors	74		
	Generator Sets	70		

As shown in Table 14-1 above, modeled unmitigated construction noise levels reached up 83 dBA Leq, assuming all equipment for the stage is utilized at the same time. To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA Leq is

used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA Leq significance threshold during Project construction activities with a maximum noise level of 59.7 dBA Leq, as shown on Table 14-2. Therefore, the noise impacts due to Project construction noise are considered less than significant at all receiver locations.

Table 14-2 Construction Level Compliance

Receiver Location	Construction Noise Levels (dBA L_{eg})		
	Highest Construction Noise Levels	Threshold	Threshold Exceeded?
R1	59.7	80	No
R2	59.5	80	No
R3	45.1	80	No
R4	47.1	80	No
R5	55.9	80	No

It is anticipated that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area. Since the nighttime concrete pours will take place outside the permitted City of Hesperia Municipal Code, Section 16.20.125.E.3 hours of 7:00 a.m. to 7:00 p.m. on any day and at any time on Sundays and federal holidays, the Project Applicant will be required to obtain authorization for nighttime work from the City of Hesperia.

As shown on Table 14-3, the noise levels associated with the nighttime concrete pour activities are estimated to range from 29.9 to 47.3 dBA Leq at the nearest noise sensitive receiver locations and will satisfy the City of Hesperia 55 dBA Leq nighttime stationary-source exterior hourly average Leq residential noise level threshold at all the receiver locations. Based on the results of this analysis, all nearest noise receiver locations will experience less than significant impacts due to the Project related nighttime concrete pour activities.

Table 14-3 Nighttime Concrete Pour Noise Level Compliance

Receiver Location	Use	Construction Noise Levels (dBA Leq)		
		Paving Construction	Nighttime Threshold	Threshold Exceeded?
R1	Residence	47.3	55	No
R2	Residence	47.2	55	No
R3	Residence	29.9	55	No
R4	Residence	31.7	55	No
R5	Residence	40.3	55	No

Operation Related Impacts:

Potential noise impacts associated with the operations of the Project are a result of loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. To present the potential worst-case noise conditions, this analysis provided below assumes the Project would be operational 24

hours per day, seven days per week. Consistent with similar warehouse and industrial uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays.

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. Table 14-4 presents the projected noise levels assuming the worst-case noise environment for loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements all operating at the same time.

Table 14-4 Operational Reference Noise Level Measurements

Noise Source	Noise Source Height (Feet)	Min./Hour		Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)
		Day	Night		
Loading Dock Activity	8’	60	60	65.7	111.5
Trailer Parking Activity	8’	60	60	62.8	103.4
Roof-Top Air Conditioning Units	5’	39	28	57.2	88.9
Trash Enclosure Activity	5’	10	10	57.3	89.0
Parking Lot Vehicle Movements	5’	60	60	52.6	81.1
Truck Movements	8’	60	60	59.8	93.2

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the receiver locations. To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Hesperia exterior noise level standards at nearby noise-sensitive receiver locations. Table 14-5 shows the operational noise levels associated with the Project will satisfy the City of Hesperia exterior noise level standards. Therefore, operational impacts are less than significant.

Table 14-5 Operational Noise Level Compliance

Receiver Location	Project Operational Noise Levels (dBA Leq)		Noise Level Standards (dBA Leq)		Noise Level Standards Exceeded?	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	45.9	45.9	60	55	No	No
R2	41.2	41.2	60	55	No	No
R3	37.6	37.5	60	55	No	No
R4	43.6	43.6	60	55	No	No
R5	47.7	47.7	60	55	No	No

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. As indicated

on Table 14-6, the Project will generate daytime operational noise level increases ranging from 0.0 to 1.3 dBA Leq at the nearest receiver locations. Table 14-7 shows that the Project will generate a nighttime operational noise level increase ranging from 0.0 to 1.5 dBA Leq at the nearest receiver locations. The Project-related operational noise level increases will satisfy the operational noise level increase significance criteria. Therefore, the incremental Project operational noise level increase is considered less than significant at all receiver locations.

Table 14-6 Daytime Project Operational Noise Level Increases

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	45.9	L1	61.0	61.1	0.1	5.0	No
R2	41.2	L2	55.6	55.8	0.2	5.0	No
R3	37.6	L3	58.6	58.6	0.0	5.0	No
R4	43.6	L4	62.7	62.8	0.1	5.0	No
R5	47.7	L5	52.3	53.6	1.3	5.0	No

Table 14-7 Nighttime Project Operational Noise Level Increases

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	37.9	L1	65.7	65.7	0.0	1.5	No
R2	36.1	L2	55.2	55.3	0.1	5.0	No
R3	39.9	L3	43.2	44.9	1.7	5.0	No
R4	45.5	L4	45.8	48.7	2.9	5.0	No
R5	42.4	L5	50.8	51.4	0.6	5.0	No

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas and at the Project site. To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, Urban Crossroads developed noise contours based on the Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis prepared by the Ganddini Group, Inc. (Appendix K). Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels.

Opening Year (2024) without Project conditions exterior noise levels range from 60.9 to 78.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Opening Year (2024) with Project conditions will range from 65.0 to 78.2 dBA CNEL. Therefore, the Project off-site traffic noise level increases range from 0.0 to 4.1 dBA CNEL. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience less than significant noise level increases on receiving land uses due to the Project-related traffic.

Additionally, General Plan Buildout (2040) without Project exterior noise levels range from 67.6 to 78.6 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. General Plan Buildout (2040) with Project conditions will range from

77.1 to 80.5 dBA CNEL. Therefore, Project off-site traffic noise level increases range from 0.0 to 1.3 dBA CNEL. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience less than significant noise level increases on receiving land uses due to the Project-related traffic. Therefore, Project operational impacts would be less than significant.

b) Generation of excessive ground borne vibration or ground borne noise levels?

Less than Significant Impact:

Construction Effects:
Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and dimmish in amplitude with distance from the source. The effect on buildings located in the vicinity depends on soil type, ground strata, and construction characteristics of receiver buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at high levels. Ground-borne vibrations from construction activities rarely reach levels that damage structures.

At distances ranging from 71 to 1,263 feet from Project construction activities, construction vibration velocity levels range from 0.000 to 0.0.19 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.2 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise sensitive receiver locations. Therefore, the Project-related vibration impacts are considered less than significant during typical construction activities at the Project site (Appendix J).

Ground-borne vibration decreases rapidly with distance. The vibration levels reported at the sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter. The potential impacts associated with construction vibration would be less than significant. Operation of the Project would not create significant groundborne vibration or groundborne noise. Thus, impacts are less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact: The Project site is not located within an airport land use plan, within two miles of a public airport, or within the vicinity of a private airstrip. The nearest airport is Hesperia Airport approximately 5.3 miles southeast of the site. The Project site is not within an airport influence area or safety zone. Given the Project site's distance from the private airport, the Project would not expose people residing or working in the Project Area to excessive noise levels. No impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Population and Housing – Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Land Use Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.12 – Population and Housing

Discussion of Impacts

Would the project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact: The CEQA Guidelines Section 15126.2(e) states growth-inducing impacts are not assumed to be beneficial, detrimental, or of little significance to the environment, but that a proposed project should be assessed in how it could foster economic growth or population growth, or the construction of additional housing, either directly or indirectly. The most immediate presence of potential growth related to the proposed Project would be the labor force associated with the construction and operation of the industrial building. The Project does not propose new residential development and would not directly contribute to population growth within the City.

Project-related employment demands would likely be filled by the existing personnel pool within the City and neighboring communities, with little or no measurable increase in the City's resident population. Significant population growth is therefore not anticipated to result from Project implementation. The Project is consistent with the goals of the Main Street and Freeway Corridor Specific Plan to facilitate and encourage development in the areas surrounding Main Street and the freeway. Although the Project may include infrastructure improvements such as paving along the Project

frontage or constructing a new curb, gutter, and sidewalk, these improvements would be concentrated to the immediate surroundings of the Project site and are unlikely to encourage unanticipated population growth. Based on the preceding, the potential for the Project to induce substantial growth directly or indirectly is considered less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact: No houses currently exist within the Project site. Additionally, the Project does not propose uses or activities that would otherwise displace housing assets or persons. Based on the preceding, the proposed Project would have no impact related to displacement of housing or people.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Public Services – Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☒	☐
v) Other public facilities?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Land Use Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.13 – Public Services

Discussion of Impacts

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:

i) Fire protection?

Less than Significant Impact: Fire protection services to the Project site are provided by the San Bernardino County Fire Department. The Project site is served by the San Bernardino County Fire Station 305, located at 8331 Caliente Road, approximately 2.7 miles southwest of the Project site. There are two additional fire stations in the City,

Station 304 located at 15660 Eucalyptus Street and Station 302 located at 17288 Olive Street. The proposed Project does not include the construction or modification of fire protection facilities.

The Project will be constructed to current building code requirements regarding fire suppression and access. Furthermore, the Project will be subject to the review and approval of the San Bernardino County Fire Department. According to the Hesperia General Plan EIR, there are adequate firefighting resources in the region to serve the proposed Project. Therefore, construction of a new or expanded fire station would not be required.

Incremental fire protection service demands generated by the Project are offset through Project payment of City of Hesperia Development Impact Fees. A portion of the City's Development Impact Fees are allocated for fire protection services. The Project Applicant would pay incumbent City Development Impact Fees at issuance of building permit(s). Based on the foregoing, the proposed Project would receive adequate fire protection service and would not result in the need for new or physically altered fire protection facilities. Impacts to fire protection facilities would be less than significant.

ii) Police protection?

Less than Significant Impact: Police protection services to the Project site are provided by the San Bernardino County Sheriff's Department. The Project site is served by the Hesperia Police Department, located at 15840 Smoke Tree Street, approximately 3.2 miles southeast of the site. The Project would introduce a new industrial facility and employees to the Project site, which would result in an incremental increase in demand for police protection services. However, the Project is not anticipated to require or result in the construction of new or physically altered police facilities. Additionally, incremental police protection service demands generated by the Project are offset through Project payment of City of Hesperia Development Impact Fees. Based on the foregoing, the proposed Project would receive adequate police protection service, and would not result in the need for new or physically altered police protection facilities. Impacts on police protection facilities would be less than significant.

iii) Schools?

Less than Significant Impact: The Project site is located within the Hesperia Unified School District. Nearby schools include Topaz Preparatory Academy approximately 1.0 mile east of the site, Mirus Secondary School approximately 1.3 miles southeast of the site, and Maple Elementary School approximately 1.5 miles northeast of the site. The proposed Project would not create a direct demand for public school services, as the Project does not include residential uses. However, the Project may contribute indirectly to the demand for public school services if Project employees and their school age children relocate to school districts serving the City. Project impacts would be incremental and would be offset through Project payment of City of Hesperia Development Impact Fees. As the Project would not directly generate students and indirect impacts would be incremental, the Project would not cause or contribute to a need to construct new or physically altered public school facilities, and Project impacts on schools would be less than significant.

iv) Parks?

Less than Significant Impact: The proposed Project would not increase the demand for public park facilities and would not result in the need to modify existing or construct new park facilities. As discussed in the *XVI. Recreation* section of this Initial Study, the Project does not include any type of residential use or other land use that may generate a population that would increase the demand for public park facilities. As such, implementation of the proposed Project would not adversely affect parks and public facilities or require the construction of new or modified public facilities, a less than significant impact would occur.

v) Other public facilities

Less than Significant Impact: Demand for public facilities is generated by the population within a facility's service area. The Project would not induce population growth and therefore would not create a demand for public facilities/services, including libraries, community recreation centers, post offices, and animal shelters. As such, implementation of the proposed Project would not adversely affect or require the construction of new or modified public facilities, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Land Use Element
2. Hesperia Main Street and Freeway Corridor Specific Plan, amended July 15, 2021.
    a. Chapter 14 Open Space and Streetscape Improvements
3. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.14 – Recreation
4. California Government Code § 66477

Discussion of Impacts

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

a-b) No Impact: The Applicant proposes to construct an industrial building up to 499,714 square feet and associated improvements. The Project does not include any type of residential use or other land use that may generate a population that would increase the utilization of existing neighborhood and regional parks or other recreational facilities. Accordingly, implementation of the proposed Project would not result in substantial physical deterioration of an existing neighborhood or regional park. The Project does not include any new on- or off-site recreation facilities, nor the expansion of any existing off-site recreational facilities. Thus, environmental effects related to the use, construction, or expansion of recreational facilities would not occur with implementation of the proposed Project. No impact on recreational facilities would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Open Space Element
    b. Conservation Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.5 – Cultural Resources
3. Title 16 – Development Code of the Hesperia Municipal Code
    a. Section 16.20.305 Change of use, alteration or demolition of a registered landmark or historic resource
4. Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project, City of Hesperia, San Bernardino County, California. Duke Cultural Resources Management, LLC. September 23, 2022. (Appendix D)

Discussion of Impacts

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Less than Significant Impact with Mitigation Incorporated: A Cultural and Paleontological Resources Assessment was prepared by Duke Cultural Resources Management, LLC (Duke CRM) dated September 23, 2022 (Appendix D). On September

12, 2022, Duke CRM staff performed a records search. The records search included a review of all recorded cultural resources within a ½ mile radius of the Project, as well as a review of known cultural resource survey and excavation reports. The records search identified three (3) cultural resources within ½ mile of the Project, none of which are located within the current Project area. Resource P-36-0021351 is the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR)-eligible California Aqueduct, located 670 feet from the southwest corner of the Project. Resource P-36-021288, located 2,400 feet northeast of the Project area, is a mid-20th century trash deposit consisting primarily of cans for which CRHR eligibility has not been determined. P-36-021366 is a mid-20th century trash scatter for which CRHR eligibility has not been determined.

On July 27, 2022, Duke CRM archaeologist conducted an intensive pedestrian field survey of the Project area. No cultural or paleontological resources were observed during the field survey. The Project site consisted of little to no vegetation with scattered debris and a motocross track established on the eastern half of the Project area. As a result of negative findings during the South Central Coastal Information Center (SCCIC) records search and field survey, Duke CRM finds that the Project has a low potential to impact cultural resources.

Duke CRM submitted an inquiry to the State of California Native American Heritage Commission (NAHC) to ascertain the presence of known sacred sites, Native American cultural resources, and/or Native American human remains within the boundaries of the proposed Project. The NAHC response letter dated June 21, 2022, indicated Native American cultural resources have been identified within the general vicinity of the Project location (Appendix D). The letter indicated that the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians shall be contacted. Mitigation Measure **TCR-1** ensures that the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians are contacted and reduces project impacts to less than significant.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant Impact with Mitigation Incorporated: As discussed above in section (a), the NAHC response letter dated June 21, 2022, indicated Native American cultural resources have been identified within the general vicinity of the Project location (Appendix D). The letter indicated that the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians shall be contacted. The City conducted consultation with 3 tribes starting in October of 2024. The Yuhaaviatam of San Manuel Nation provided mitigation, which has been incorporated into this initial study. Mitigation Measure **TCR-1, and TCR-2** ensures that the San Manuel Band of Mission Indians are contacted and reduces project impacts to less than significant.

Mitigation Measures

Mitigation:

(a, b)

TCR-1: Tribal Notification and Monitoring Plan

The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in CUL-1, of any pre-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site.

TCR-2: Tribal Coordination and Documentation Sharing with YSMN

Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the project

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems – Would the project:				
a) Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Land Use Element
2. Draft Environmental Impact Report for the City of Hesperia General Plan Update, May 26, 2010.
    a. 3.16 – Utilities and Service Systems

Discussion of Impacts

Would the project:

a) Require or result in the relocation or construction of new or expanded water or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact: Water and sewer services will be provided to the Project site by the City of Hesperia Water District. The City will require payment of applicable water and sewer connection and service fees for the Project. Fee payment will provide funds for water and wastewater system maintenance and future expansion, acting to offset the Project's incremental demands for water and wastewater collection and treatment services. The proposed Project includes a combination of an above ground infiltration basin and underground CMP infiltration basin to treat stormwater runoff for water quality purposes. Electrical services will be provided to the Project by Southern California Edison and gas will be provided by the Southwest Gas Corporation. Due to the vacant, undeveloped nature of the Project site, both dry and wet utilities, including domestic water, sanitary sewer, and electricity, need to be extended onto the Project site. However, the proposed Project will not require or result in the relocation or construction of new or expanded water or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, environmental impacts related to the construction and relocation of utility facilities would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less than Significant Impact: The City of Hesperia 2020 Draft Urban Water Management Plan (UWMP) and 2008 Water Master Plan provide a framework that accommodate for future growth within the City. According to the 2020 UWMP from the Hesperia Water District, the District has not experienced water supply constraints or deficiencies. Table 19-1 describes data from the 2020 Draft UWMP which shows that the District's base years for average, single dry, and multiple dry years are sufficient in meeting historical water demands.

Table 19-1 Five Consecutive Dry Years Water Supply and Demand through 2045 (acre-feet per year)

		2025	2030	2035	2040	2045
First Year	Supply Totals	15,250	16,290	16,990	17,740	18,420
	Demand Totals	15,250	16,290	16,990	17,740	18,420
	Difference	0	0	0	0	0
Second Year	Supply Totals	15,460	16,430	17,140	17,880	18,540
	Demand Totals	15,460	16,430	17,140	17,880	18,540
	Difference	0	0	0	0	0
Third Year	Supply Totals	15,670	16,570	17,290	18,020	18,660
	Demand Totals	15,670	16,570	17,290	18,020	18,660
	Difference	0	0	0	0	0
Fourth Year	Supply Totals	15,880	16,710	17,440	18,160	18,780
	Demand Totals	15,880	16,710	17,440	18,160	18,780
	Difference	0	0	0	0	0

Fifth Year	Supply Totals	16,090	16,850	17,590	18,300	18,900
	Demand Totals	16,090	16,850	17,590	18,300	18,900
	Difference	0	0	0	0	0

As illustrated in Table 19-1, the City's water demands can be met under multiple dry years. Future water supply will meet projected demand due to diversified supply and conservation measures. The Hesperia Water District has sufficient water resources available to supply water service to the Project. Sufficient water supplies are available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, impacts associated with water supply availability would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact: Wastewater services are provided by the Victor Valley Wastewater Reclamation Authority (VVWRA). VVWRA owns and operates the Hesperia Subregional Water Recycling Facility. Currently, this facility is capable of treating up to 1.0 million gallons per day (mgd) of wastewater that is expandable to 4.0 mgd. The Hesperia Subregional Water Recycling Facility is connected to an interceptor system that extends approximately 15 miles from the regional treatment facility (Victorville) south to I Avenue and Hercules in the City of Hesperia. No solid waste is treated at the Hesperia Subregional Water Recycling Facility. Solid waste is returned to the sewer line where it continues via VVWRA's 3-mile interceptor to the VVWRA Regional Wastewater Treatment Plant (RWWTP) in Victorville. When measured in 2016, the RWWTP treated on average 12.5 mgd of wastewater and had a maximum treatment capacity of 18.0 mgd. (City of Hesperia 2016, 2021; Hesperia Water District 2016, 2021). According to the wastewater generation rates used in the Project's air quality, greenhouse gas emissions, and energy analyses, the Project would generate approximately 0.332057 mgd of wastewater. Wastewater from the proposed Project is not anticipated to exceed the capacity to the wastewater treatment provider, even when considering existing and cumulative demand. Project impacts are expected to be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact: Approximately 75% or more of solid waste generated by the City is being recycled (Advance Disposal 2021), exceeding the 50 percent requirement pursuant to the California Integrated Waste Management Act of 1989 (AB939). Sanitation services are administered by Advance Disposal, located at 17105 Mesa Street, Hesperia. Any remaining waste is collected and hauled to the Victorville Sanitary Landfill at 18600 Stoddard Wells Road in Victorville, owned and operated by the County of San Bernardino. The Victorville Landfill has a maximum permitted daily throughput of 3,000 tons, has a maximum capacity of 93,400,000 cubic yards, and has a remaining capacity of 79,400,000 cubic yards. As of 2020, this landfill was expected to remain open for another 27 years. Based on the CalRecycle Industrial Section

Generation Rates chart, the Project would generate approximately 30,675 pounds of solid waste per day.

Table 19-2 Estimated Solid Waste Generation

Waste Generation Source	Square Feet	Generation Rate, pounds per day	
		Per square foot	Total
Industrial	489,850	.0625 pounds	30,615 (lbs/day)
Office	10 ,000	0.006 pounds	60 (lbs/day)
Source: CalRecycle, 2019b, Estimated Solid Waste Generation Rates (ca.gov)			

Industrial waste, defined in Section 17225.35 of Title 14 of the California Code of Regulations, is not subject to the requirements of the AB 341 regulation (CalRecycle, 2019b). The industrial uses proposed by the Project, and solid waste generated by those uses, would not otherwise conflict with federal, state, and local statutes and regulations related to solid waste. Based on the preceding, the potential for the Project to generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals is less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact: The Project would be implemented and operated in compliance with applicable City General Plan Goals and Policies, and would comport with City Zoning regulations—specifically, the Project would comply with local, state, and federal initiatives and directives acting to reduce and divert solid waste from landfill waste streams. As described in section (d) above, the Project would comply with the California Integrated Waste Management Act of 1989 (AB 939) and AB 341 as implemented by the City. The proposed Project is required to comply with all applicable federal, state, County, and City statues and regulations related to solid waste as a standard project condition of approval. Therefore, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire – If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Project Impacts and Mitigation Measures

Sources:

1. City of Hesperia General Plan, 2010.
    a. Safety Element
2. California Department of Forestry and Fire Protection. Very High Fire Hazard Severity Zones in LRA – Western Riverside County. December 2009.

Discussion of Impacts

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact: Wildland fire protection in California is the responsibility of the state, local government, or the federal government. The Project site is located within a Local Responsibility Area (LRA), as identified on the latest Fire Hazard Severity Zone (FHSZ) map prepared by the California Department of Forestry and Fire Protection (CALFIRE). The Project site is not located in a State Responsibility Area (SRA) or classified as a Very High Fire Severity Zone (VHFSZ) within a LRA. The proposed Project does not block access to the Project site or to surrounding properties and does not impede the City's evacuation program. Furthermore, the Project will be subject to the review and approval of

the San Bernardino County Fire Department. Based on the preceding, the potential for the Project to substantially impair an adopted emergency response or evacuation plan is less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less than Significant Impact: As discussed above in section (a), the Project site is not located within a SRA fire hazard zone. The Project site is relatively flat and does not contain considerable slopes that would exacerbate wildfire risk. Additionally, the Project site currently consists of sparse desert vegetation that would be removed with Project implementation. Prevailing winds are a concern throughout the desert region. However, the proposed Project does not cause greater wildfire risks than other developments throughout the City of Hesperia. Therefore, a less than significant impact would occur.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than Significant Impact: The Project does not require the installation or maintenance of associated infrastructure that would exacerbate fire risks or result in temporary or ongoing impacts to the environment. Although the Project may include infrastructure improvements such as paving along the Project frontage or constructing a new curb, gutter, and sidewalk, these improvements would be concentrated to the immediate surroundings of the Project site and are unlikely to exacerbate fire risk, a less than significant impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less than Significant Impact: According to General Plan Exhibit SF-2, the Project site is identified within FEMA Zone X, which designates areas that are outside of the 100-year flood or are protected from the 100-year flood by levees. Additionally, the Project site and the site's surroundings are relatively flat. Therefore, the Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, a less than significant impact would occur.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. Mandatory Findings of Significance				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California History or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Discussion of Impacts

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California History or prehistory?

Less than Significant Impact with Mitigation Incorporated: The proposed Project would not substantially impact any scenic vistas, scenic resources, or the visual character of the area, and would not result in excessive light or glare. The Project site is located within an area that contains vacant land, residential uses, and light industrial/warehouse uses. The proposed Project would not significantly impact any sensitive species, plant communities, fish, wildlife, or habitat for any sensitive species with incorporation of Mitigation Measures **BIO-1** through **BIO-5**.

As described in Section VI and Section XVIII, adverse impacts to historical resources would be less than significant with incorporation of Mitigation Measures **CUL-1** and **TCR-1**. Based on the preceding analysis of potential impacts in the responses to Sections I through XX, no evidence is presented that the proposed Project would degrade the quality of the environment.

Impacts related to degradation of biological resources and cultural resources would be less than significant with mitigation incorporated.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Potentially Significant Impact: Cumulative impacts can result from the interactions of environmental changes resulting from one proposed Project with changes resulting from other past, present, and future projects that affect the same resources, utilities and infrastructure systems, public systems, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short-term and temporary, usually consisting of overlapping construction impacts, as well as long-term, due to the permanent land use changes and operational characteristics involved with the proposed Project.

The Project's estimated greenhouse gas emissions exceed the SCAQMD-recommended threshold of 3,000 MTCO2e per year. As such, the Project could contribute incrementally to cumulatively significant GHG impacts in combination with other past, present, and reasonably foreseeable projects. These cumulative impacts will be fully analyzed in the Draft Environmental Impact Report (DEIR).

Where appropriate, the environmental checklist questions above include discussion regarding cumulative impacts of the Project when developed in conjunction with related projects. Adherence to applicable regulations would reduce certain environmental impacts; however, because the Project exceeds the SCAQMD GHG threshold, its contribution to cumulative GHG emissions may be significant. Therefore, GHG-related cumulative impacts are considered potentially significant and will be further evaluated in the DEIR.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Impact: Based on the analysis of the Project's impacts in this Initial Study, there are no significant long-term effects related to noise, hazardous materials, , increased demand for water use, wastewater disposal, and electricity use, or increased demand on emergency response services; however the Project's estimated greenhouse gas emissions and VMT exceed applicable thresholds and therefore have the potential to cause adverse effects on human beings directly or indirectly.

While temporary construction-related effects remain less than significant, and the Project is generally consistent with applicable plans, GHG and VMT-related impacts are considered potentially significant and will be addressed in the forthcoming DEIR.

CHAPTER FIVE – MITIGATION, MONITORING, AND REPORTING PROGRAM (MMRP)

Mitigation measures are included within each section of the initial study checklist and are provided below. Table 5-: Mitigation Monitoring and Reporting Program outlines the potential impacts and mitigation measures of the proposed Project and assigns responsibility for the oversight of each mitigation measure. This Table shall be included in all bid documents and included as a part of the Project development.

Table 5-1. Mitigation Monitoring and Reporting Program

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
Transportation/Traffic				
I. Transportation/ Traffic	**TRANS-1:** Contribute fair share as determined by the City to construct a second southbound left turn lane at Key Pointe Drive (NS) at Main Street (EW).	Applicant and City of Hesperia	Prior to issuance of occupancy permit	Less than Significant
Biological Resources				
V. Biological Resources	**BIO-1 Incidental Take Permit from CDFW** Mitigation for direct impacts to the Western Joshua Trees within the Project Site shall be fulfilled through attainment of a Western Joshua Tree Conservation Act (WJTCA) Incidental Take Permit. An Incidental Take Permit (ITP) application and supporting documentation shall be submitted to CDFW for review and approval for removal of Western Joshua trees on the Project site. An ITP establishes a performance standard requiring that the impacts be "minimized and fully mitigated" with "measures that are roughly proportional in extent to the impact of the authorized taking on the species." Therefore,	Applicant and City of Hesperia	Prior to issuance of grading permit	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	additional mitigation measures, such as the purchase of credits from an approved conservation or mitigation bank, land acquisition, or entry into a conservation easement, will be determined in consultation with CDFW to meet ITP requirements. A completed application requires a completed CEQA document to accompany the ITP application and fee. CDFW requires the CEQA document to have a state clearing house number, show proof of filing fees, and that the document has been circulated. CDFW will then review the ITP and CEQA document and make a determination of mitigation.			
V. Biological Resources	**BIO-2 Desert Native Plant Protection and Relocation Plan** A Desert Native Plant Protection and Relocation Plan (Plan) for the proposed Project shall be composed that will provide detailed specifications for the proposed treatment, avoidance, or relocation of all smoke trees (Cotinus sp.), species in the Agavacea family, mesquite (Prosopis sp.), large creosote bushes (Larrea sp.), Western Joshua trees, and any other plants protected by the State Desert Native Plant Act. Further, the Protected Desert Plant Plan will provide measures to meet the requirements of Chapter 16.24 of the City if Hesperia's (City) Municipal Code to protect, preserves, and mitigate impacts to Western Joshua tree. The	Applicant and City of Hesperia	Prior to issuance of grading permit	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	City's Protected Plan Policy (HMC 16.24) states the following for commercial and industrial projects: • The Plan shall be certified by an arborist or registered botanist. • An application and fee shall be completed and paid to the City of Hesperia. • Healthy, transplantable Western Joshua trees shall be relocated on-site or may be placed in an adoption program. The Desert Native Plant Protection and Relocation Plan will address requirements of the City's Protected Plant Policy and provide details from the initial survey of the site's Western Joshua trees and other sensitive desert plant species, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees or bushes requiring removal and relocation. Specifically, the Plan will include site location and characteristics; relocation requirements including Western Joshua tree and other sensitive desert plant species report and removal/relocation and transplanting specifics; success criteria and associated necessary fees, protective measures prior to, during and after construction, and maintenance after construction.			

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
V. Biological Resources	**BIO-3 Pre-Construction Western Burrowing Owl Clearance Surveys** In accordance with the Staff Report on Burrowing Owl Mitigation (CDFW 2012), two (2) pre-construction clearance surveys shall be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. Once surveys are completed, the qualified biologist shall prepare a final report documenting surveys and findings. If no burrowing owls or occupied burrows are detected, Project construction activities may begin. If an occupied burrow is found within the Project Site during pre-construction clearance surveys, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to the County, which may consult with CDFW for review, prior to initiating Project construction activities.	Applicant and City of Hesperia	14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities.	Less than Significant
V. Biological Resources	**BIO-4 Passive and Active Relocation of Western Burrowing Owls** If Western burrowing owls are observed on the Project site during preconstruction surveys, CDFW shall be immediately notified to determine if avoidance of the nest is appropriate until the nest is vacated or to gain concurrence from CDFW on active or passive relocation actions. All passive or relocation activities shall be in concurrence with CDFW guidelines (Staff Report on Burrowing Owl Mitigation 2012).	Applicant and City of Hesperia	If Western burrowing owls are observed on the Project site during preconstruction surveys	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	If burrowing owl are present and nesting on-site the following steps shall be necessary to reduce impacts to less than significant. These steps may be augmented by recommendations from CDFW: a. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that: (1) owls have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. b. A qualified biologist shall exclude all owls from active burrows using one-way doors. Concurrently, all inactive burrows and other sources of secondary refuge for burrowing owls shall be collapsed and removed from the site. c. Following and 24 to 48-hour observation period, all vacated burrows shall be collapsed. d. A qualified biologist shall conduct a post-exclusion survey confirming the absence of burrowing owls on the Project site. Should newly occupied burrows be discovered on the Project			

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	site the exclusion activities shall be repeated.			
V. Biological Resources	**BIO-5 Nesting Bird Preconstruction Surveys** If it is not feasible to avoid the nesting bird season (typically January through July for raptors and February through August for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or directly adjacent to the Project site. If active nests are located, the extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, the nesting bird survey shall occur no earlier than seven (7) days prior to the commencement of construction. In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such	Applicant and City of Hesperia	Within 7-days of the commencement of construction activities (if construction activities commence during the nesting/breeding season of native bird species – February through August).	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).			
Cultural Resources				
VI. Cultural Resources	**CUL-1 Inadvertent Finds** In the event that cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease. A qualified archaeologist meeting the Secretary of the Interior's Professional Qualification Standards shall be retained to assess the significance of the find. Work may continue on other portions of the Project site outside the buffered area during this assessment. If the discovery is determined to be of Native American origin, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as outlined in TCR-1, and provided information following the archaeologist's initial assessment to allow for Tribal input on the significance and recommended treatment of the resource.	Applicant and City of Hesperia	If previously unidentified cultural materials are unearthed during construction	Less than Significant
VI. Cultural Resources	**CUL-2: Monitoring Plan** If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring	Applicant and City of Hesperia	If previously unidentified cultural materials are unearthed during construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.			
VI. Cultural Resources	**CUL-3: Human remains discovery** If human remains or funerary objects are encountered, all work shall stop in the area (within an 100-foot buffer of the find) and the County Coroner must be notified immediately in accordance with California Health and Safety Code Section 7050.5. No further disturbance shall occur until the Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be prehistoric, the Coroner shall notify the Native American Heritage Commission (NAHC), which will identify and notify the Most Likely Descendant (MLD). With permission of the landowner or authorized representative, the MLD may inspect the site and shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of the remains and any associated items.	Applicant and City of Hesperia	If previously unidentified human remains are unearthed during construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
Geology and Soils				
VIII. Geology and Soils	**GEO-1 Grading and Construction** The Project shall incorporate the recommendations provided in the Geotechnical Investigation prepared by Southern California Geotechnical, dated July 18, 2022 (Appendix F). The recommendations are presented in the following sections of the report: Site Grading Recommendations, Construction Considerations, Foundation Design and Construction, Floor Slab Design and Construction, Retaining Wall Design and Construction, and Pavement Design Parameters.	Applicant and City of Hesperia	Prior to start of construction	Less than Significant
VIII. Geology and Soils	**GEO-2 Paleontological Monitoring** A paleontological monitor shall be present during ground disturbing activities below four (4) feet in depth within the Project. The monitor shall work under the direct supervision of a qualified paleontologist (B.S./B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated competence in paleontological research, fieldwork, reporting, and curation). 1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols. 2. The paleontological monitor shall be present full-time during ground	Applicant and City of Hesperia	During ground disturbing activities below four (4) feet in depth within the Project	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	disturbance below 4 feet in depth within the Project, including but not limited to grading, trenching, utilities, and off-site easements. If, after excavation begins, the qualified paleontologist determines that the sediments are not likely to produce fossil resources, monitoring efforts shall be reduced. 3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered. 4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area. 5. In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly mapped, documented, removed, and the area cleared. 6. If the discovery is significant the qualified paleontologist shall notify the CLIENT and CITY immediately. 7. In consultation with the CLIENT and CITY the qualified paleontologist shall develop a plan of mitigation which will likely include full-time monitoring, salvage excavation,			

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
	scientific removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.			
Tribal Cultural Resources				
XVIII. Tribal Cultural Resources	**TCR-1: Tribal Notification and Monitoring Plan** The Yuhaaviatam of San Manuel Nation Cultural Resources Management Department (YSMN) shall be contacted, as detailed in CUL-1, of any pre-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a Cultural Resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with YSMN, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents YSMN for the remainder of the project, should YSMN elect to place a monitor on-site.	Applicant and City of Hesperia	If previously unidentified cultural materials are unearthed during construction	Less than Significant

Section Number	Mitigation Measures	Responsible for Monitoring	Timing	Impact after Mitigation
XVIII. Tribal Cultural Resources	**TCR-2: Tribal Coordination and Documentation Sharing with YSMN** Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the project	Applicant and City of Hesperia	If previously unidentified cultural materials are unearthed during construction	Less than Significant

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6.2 List of Preparers

City of Hesperia

Ryan Leonard, Senior Planner

Casc Engineering and Consulting, Inc.

Frank Coyle, Director of Planning
Danielle Ornelas, Senior Environmental Planner
Jess Bruckhart, Senior Planner
Katie Faulkner, Assistant Environmental Planner/Biologist
Ben Hamada, GIS Specialist

APPENDIX A
Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis

Amargosa and Palmetto High-Cube Warehouse

AIR QUALITY IMPACT ANALYSIS

CITY OF HESPERIA

PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Ali Dadabhoy
adadabhoy@urbanxroads.com

FEBRUARY 1, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
%	Percent
1992 CO Plan	1992 Federal Attainment Plan for Carbon Monoxide
$\mu g/m^3$	Microgram per Cubic Meter
AB 2595	California Clean Air Act
AQIA	Air Quality Impact Analysis
AQMIS	Air Quality and Meteorological Information System
AQMP	Air Quality Management Plan
BAAQMD	Bay Area Air Quality Management District
BACM	Best Available Control Measures
BMPs	Best Management Practices
BSC	Building Standards Commission
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model™
CALGreen	California Green Building Standards Code
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CIBP	Commercial/Industrial Business Park
CO	Carbon Monoxide
COHb	Carboxyhemoglobin
EPA	Environmental Protection Agency
g/L	Grams Per Liter
GHG	Greenhouse Gas
HRA	Health Risk Assessment
lbs/day	Pounds per Day
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MWELO	Model Water Efficient Landscape Ordinance
NAAQS	National Ambient Air Quality Standards
N_2	Nitrogen
NO	Nitric Oxide
N_2O	Nitrous Oxide

NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_2	Oxygen
O_3	Ozone
Pb	Lead
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
ppm	Parts Per Million
Project	Amargosa and Palmetto High-Cube Warehouse
ROG	Reactive Organic Gases
RECLAIM	Regional Clean Air Incentives Market
SDAB	Southeast Desert Air Basin
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Oxides of Sulfur
TAC	Toxic Air Contaminant
TIA	Hesperia Commerce Center II Traffic Impact Analysis
TSF	Thousand Square Feet
VOC	Volatile Organic Compound
VPH	Vehicles Per Hour

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* (1). Table ES-1 shows the findings of less than significant for each potential air quality impact under CEQA. As shown, no mitigation measures (MM) are required.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.6	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.7	*Less Than Significant*	*n/a*
Sensitive Receptors	3.8	*Less Than Significant*	*n/a*
Odors	3.9	*Less Than Significant*	*n/a*
Cumulative Impacts	3.10	*Less Than Significant*	*n/a*

ES.2 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits. Mojave Desert Air Quality Management District (MDAQMD) Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 1113 (Architectural Coatings) (2). It should be noted that these Best Available Control Measures (BACMs) are not mitigation as they are standard regulatory requirements. As such, credit for Rule 1113 has been taken.

MDAQMD RULE 1113

This rule serves to limit the Volatile Organic Compound (VOC) content of architectural coatings used on projects in the MDAQMD. Any person who supplies, sells, offers for sale, or manufactures

any architectural coating for use on projects in the MDAQMD must comply with the current VOC standards set in this rule (2)[1].

ES.3 CONSTRUCTION-SOURCE MMS

The Project would not exceed any thresholds of significance for construction-source emissions. As such, a less than significant impact would occur for Project-related construction-source emissions and no mitigation would be required.

ES.4 OPERATIONAL-SOURCE MMS

The Project would not exceed any thresholds of significance for operational-source emissions. As such, a less than significant impact would occur for Project-related operational-source emissions and no mitigation would be required.

[1] Only paints no more than 50 g/L of VOC consistent with MDAQMD Rule 1113 for flat coatings shall be used.

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1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Amargosa and Palmetto High-Cube Warehouse (Project).

The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the MDAQMD.

1.1 SITE LOCATION

The proposed Project is located on the northwest corner of Amargosa Road, and Palmetto Way in the City of Hesperia as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,850[2] square high-cube fulfillment center warehouse building as shown on Exhibit 1-B. The proposed project is anticipated to be constructed and fully operational by year 2024.

It is expected that the Project business operations would primarily be conducted within the enclosed building, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related emission sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, and on-site cargo handling equipment. This analysis is intended to describe air quality impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

2 The proposed building square footage utilized in this analysis is based on a previous site plan which assumed a slightly smaller building square footage. Nonetheless, the emissions analyzed in this report would not change and a less than significant impact is expected.

EXHIBIT 1-A: LOCATION MAP

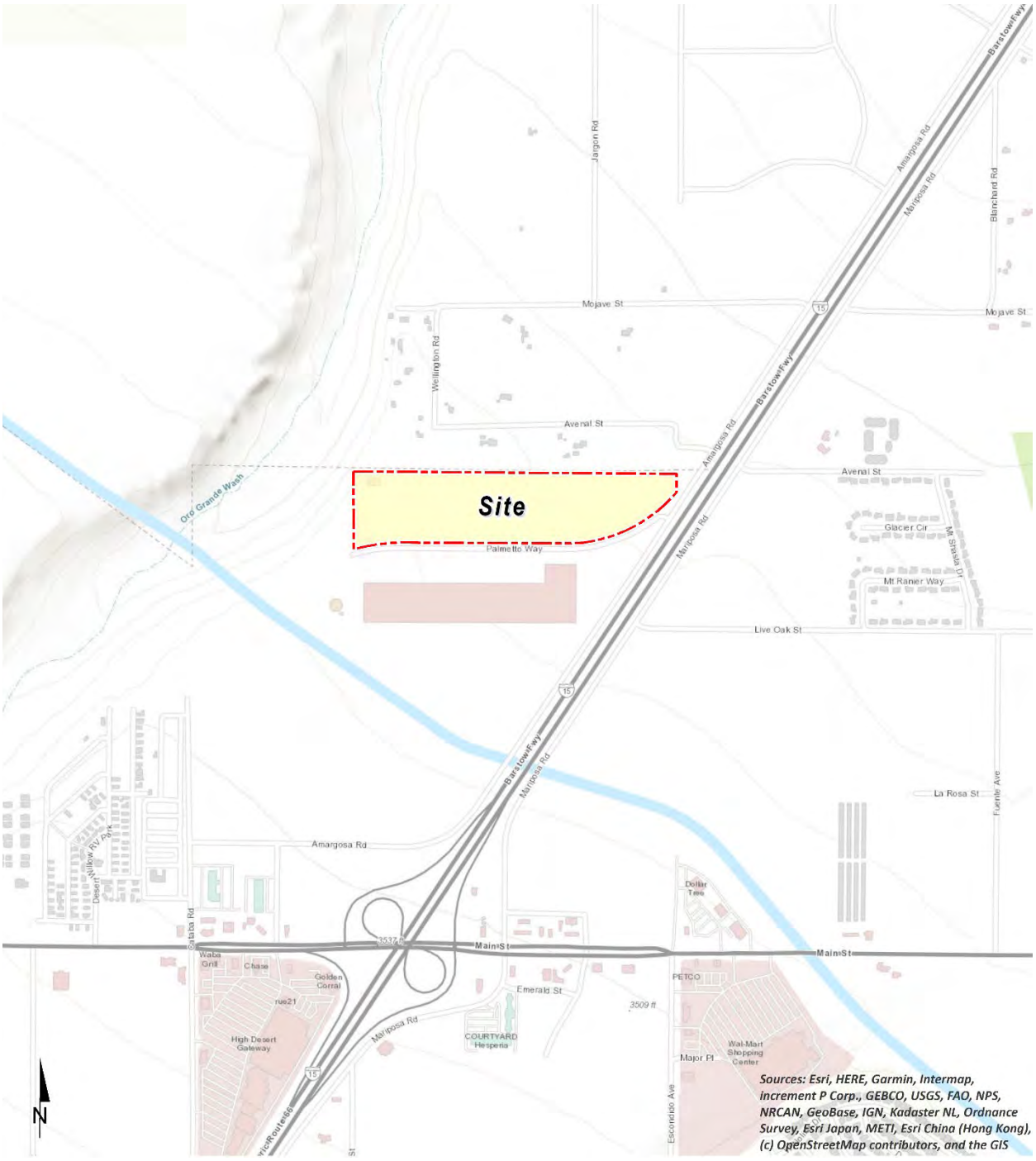
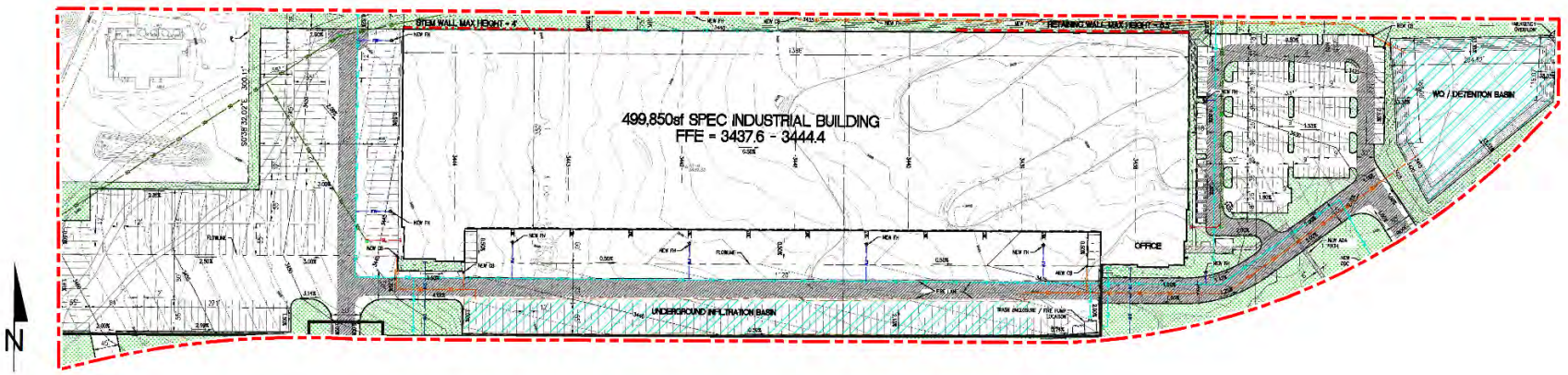


EXHIBIT 1-B: SITE PLAN



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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 MOJAVE DESERT AIR BASIN

The Project site is located in the portion of the County of San Bernardino, California, that is part of the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of the MDAQMD. The air quality assessment for the Project evaluates emissions impacts associated with short-term construction and long-term operation of the Project. A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the MDAQMD, have created guidelines and requirements to conduct air quality analyses. The MDAQMD's current guidelines, included in its *California Environmental Quality Act and Federal Conformity Guidelines* (August 2016), were adhered to in the assessment of air quality impacts for the Project.

2.2 REGIONAL CLIMATE

Air quality in the Project area is not only affected by various emissions sources (mobile, industry, etc.) but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall.

The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains within the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and Central California valley regions by mountains (highest elevation is approximately 10,000 feet), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountains by the Cajon Pass (4,200 feet). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified

as dry-very hot desert, to indicate that at least three months have maximum average temperatures over 100.4° F.

Snow is common above 5,000 feet in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 feet, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During late summer, moist high-pressure systems from the Pacific collide with rising heated air from desert areas, resulting in brief, high-intensity thunderstorms that can cause high winds and localized flash flooding.

2.3 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (3):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
Carbon Monoxide (CO)	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the MDAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia

Criteria Pollutant	Description	Sources	Health Effects
			(oxygen deficiency) as seen at high altitudes.
Sulfur Dioxide (SO_2)	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X)	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.

Criteria Pollutant	Description	Sources	Health Effects
NO_X	NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer	Formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG sources include any source	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a

Criteria Pollutant	Description	Sources	Health Effects
	months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM_{10} (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X,	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of

Criteria Pollutant	Description	Sources	Health Effects
	(haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$ (Particulate Matter less than 2.5 microns): A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.	organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
Volatile Organic Compounds (VOC)	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not	Organic chemicals are widely used as ingredients in household products. Paints, varnishes and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products.	Breathing VOCs can irritate the eyes, nose and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.

Criteria Pollutant	Description	Sources	Health Effects
	form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	
Reactive Organic Gases (ROG)	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Lead is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. The major sources of lead emissions are ore and metals processing, particularly lead smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Criteria Pollutant	Description	Sources	Health Effects
	Project does not include operational activities such as metal processing or lead acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of lead emissions.		Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves.	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.4 EXISTING AIR QUALITY

Existing air quality is measured at established MDAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (4).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May ,4 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the Air District meets the standards set by the United State Environmental Protection Agency (EPA) or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (5).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards [1]**		**National Standards [2]**		
		Concentration [3]	**Method [4]**	**Primary [3,5]**	**Secondary [3,6]**	**Method [7]**
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

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TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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2.5 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: O_3, PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2 and Pb which are known as criteria pollutants. The MDAQMD monitors levels of various criteria pollutants at 6 permanent monitoring stations throughout the air district (6). On February 20, 2019, CARB posted the 2018 amendments to the state and national area designations. See Table 2-3 for attainment designations for the MDAB and the Southeast Desert Air Basin (SDAB) (7). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the MDAB and SDAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE MDAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Attainment	Unclassifiable/Attainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the MDAB and SDAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for O_3 and PM_{10} was obtained from the MDAQMD Hesperia-Olive Street monitoring station, located approximately 5.08 miles east of the project site in Hesperia. Data for CO, NO_2, and $PM_{2.5}$ was obtained from the MDAQMD Victorville-Park Avenue, located approximately 5.75 miles northeast of the project site in Victorville. It should be noted that the Victorville-Park monitoring station was utilized in lieu of the Hesperia-Olive Street monitoring station only where data was not available from the nearest monitoring site.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained using the CARB iADAM: Air Quality and Data Statistics and the Air Quality and Meteorological Information System (AQMIS) (8) (9). Data for SO_2 has been omitted as attainment is regularly met and few monitoring stations measure SO_2 concentrations. It should be noted that the table below is provided for informational purposes.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2018-2020

Pollutant	Standard	Year		
		2018	2019	2020
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.113	0.108	0.118
Maximum Federal 8-Hour Concentration (ppm)		0.100	0.088	0.094
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	9	9	9
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	71	47	46
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	5.408	1.493	5.461
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	51.4	56.0	59.4
Annual Federal Standard Design Value		12	11	13
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	138.9	157.7	224.1
Annual Federal Arithmetic Mean ($\mu g/m^3$)		27.8	24.5	28.2
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	1	1
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	--	--	--
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	32.7	17.8	48.4
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	7.9	7.0	9.7
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	0	0	4

Source: California Air Resource Board iADAM: Air Quality Data Statistics and AQMIS
ppm = Parts Per Million
$\mu g/m^3$ – microgram per cubic meter
-- = data not available

2.7 REGULATORY BACKGROUND

2.7.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (10). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (11). The CAA also mandates that states submit and implement SIPs for local areas not meeting these

standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (12) (13). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the MDAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

2.7.2 CALIFORNIA REGULATIONS

CARB

CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the MDAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (14) (10).

Local air quality management districts, such as the MDAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;

- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (15). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (16):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.

- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).

- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.7.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the MDAB. The NAAQS, the Project region within the MDAB is in nonattainment for O_3 (8-hour) and PM_{10}. For the CAAQS, the Project region within the MDAB is in nonattainment for O_3 (1-hour and 8-hour) and PM_{10}. In response, the MDAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards (17). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.7.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the MDAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the *State CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The MDAQMD has developed regional significance thresholds for regulated pollutants, shown below in Table 3-1. The MDAQMD's *Guidelines* indicate that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact (18).

TABLE 3-1: MAXIMUM REGIONAL DAILY EMISSIONS THRESHOLDS

Pollutant	Daily Threshold (lbs/day)
CO	548 lbs/day
NO_X	137 lbs/day
VOC	137 lbs/day
SO_X	137 lbs/day
PM_{10}	82 lbs/day
$PM_{2.5}$	65 lbs/day

Note: lbs/day – pounds per day

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CALEEMOD

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation (19). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 and 3.2.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on consultation with the client, it is anticipated that approximately 300 cubic yards of soil import will be required. Although it is anticipated that soil will be imported from within the City of Hesperia, a conservative hauling trip distance of 20 miles was utilized.

OFF-SITE UTILITY AND INFRASTRUCTURE IMPROVEMENTS

In addition, to support the Project development, there will be paving for off-site improvements associated with roadway construction and utility installation, as well as installation of fire hydrants and street lighting. It is expected that the off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints on the amount of

daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals on Table 3-3. As such, no impacts beyond what has already been identified in this report are expected to occur.

3.4.1 CONSTRUCTION DURATION

Construction is expected to commence in January 2023 and will last through December 2023. Construction duration by phase is shown on Table 3-2. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[3] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*. The duration of construction activity was based on the 2024 opening year.

3.4.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod defaults. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this analysis.

TABLE 3-2: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	1/15/2023	2/1/2023	13
Grading	2/1/2023	3/31/2023	43
Building Construction	3/15/2023	11/30/2023	187
Paving	11/15/2023	12/30/2023	33
Architectural Coating	11/6/2023	12/30/2023	40

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Number	Hours Per Day
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Excavators	2	8

[3] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3"OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Phase Name	Equipment	Number	Hours Per Day
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

IMPACTS WITHOUT MITIGATION

CalEEMod calculates maximum daily emissions for summer and winter periods. As such, the estimated maximum daily construction emissions without mitigation for both summer and winter periods are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, Project construction-source emissions would not exceed the applicable MDAQMD regional thresholds for any criteria pollutant. As such, emissions generated during Project construction are less than significant and mitigation is not required.

TABLE 3-4: EMISSIONS SUMMARY OF CONSTRUCTION – WITHOUT MITIGATION

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2023	2.70	16.30	36.00	0.04	3.91	1.37
Winter						
2023	70.80	89.00	73.50	0.12	13.50	7.97
Maximum Daily Emissions	**70.80**	**89.00**	**73.50**	**0.12**	**13.50**	**7.97**
SCAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source emissions are presented in Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of VOCs, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions

Unless otherwise noted, all emissions modeling presented herein employed CalEEMod default inputs and parameters.

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project will require maintenance and will therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered.

3.5.3 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis* were utilized in this analysis (20).

3.5.3.1 APPROACH FOR ANALYSIS OF THE PROJECT

In order to determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses.

For the proposed industrial uses, it is important to note that although the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis* does not breakdown passenger cars by type, this analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[4] & LDT2[5]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis:

TABLE 3-5: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High Cube Fulfillment (Non-Sort Facility) Warehouse	52.72%	4.97%	22.22%	17.18%	2.88%

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, MDV, and MCY vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated SCAQMD recommended truck trip length 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis*. The trip length function for the general light industrial and manufacturing uses has been revised to 30.47 miles with an assumption of 100% primary trips for the proposed industrial land uses.

In order to be consistent with the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis*, trucks are broken down by truck type. The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided in the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis*. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[6] & LHDT2 [7])/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks

[4] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[5] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

[6] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[7] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

(HHDT)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

TABLE 3-6: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High Cube Fulfillment (Non-Sort Facility) Warehouse	13.03%	3.49%	20.87%	62.61%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of break and tire wear particulates.

3.5.4 ON-SITE CARGO HANDLING EQUIPMENT EMISSIONS

It is common for warehouse buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to two (2) 200 horsepower (hp), compressed natural gas or gasoline-powered tractors/loaders/backhoes operating at 4 hours a day[8] for 365 days of the year.

3.5.6 OPERATIONAL EMISSIONS SUMMARY

As previously stated, CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. The estimated operational-source emissions are summarized on Table 3-7. Detailed operation model outputs for the Project are presented in Appendix 3.2. As shown on Table 3-7, the Project's daily regional emissions from on-going operations will not exceed any of the thresholds of significance.

[8] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

TABLE 3-7: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	4.67	13.60	62.00	0.21	5.55	1.22
Area Source	15.10	0.18	21.70	< 0.005	0.03	0.04
Energy Source	0.14	2.55	2.14	0.02	0.19	0.19
On-Site Equipment Source	0.23	0.75	32.89	0.00	0.06	0.05
Total Maximum Daily Emissions	**20.14**	**17.08**	**118.73**	**0.23**	**5.83**	**1.50**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile Source	4.27	14.60	46.70	0.20	5.55	1.22
Area Source	11.50	0.00	0.00	0.00	0.00	0.00
Energy Source	0.14	2.55	2.14	0.02	0.19	0.19
On-Site Equipment Source	0.23	0.75	32.89	0.00	0.06	0.05
Total Maximum Daily Emissions	**16.14**	**17.90**	**81.73**	**0.22**	**5.80**	**1.46**
SCAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod operational-source emissions are presented in Appendix 3.2.

3.6 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific CO "hot spots" is not needed to reach this conclusion. An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown on Table 3-8.

TABLE 3-8: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (*1992 CO Plan*), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (21). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 3-9. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vph and AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (21). The *2003 AQMP* estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm)[9].

TABLE 3-9: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

[9] Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm)

Trip generation estimates for the Project indicate that the proposed warehouse uses would generate an estimated maximum of approximately 77 trips during the PM peak hour.

Moreover, the ambient 1-hr CO concentration within the Project study area is estimated to be 5.461 ppm (data from Victorville station for 2020). Therefore, even if the traffic volumes for the Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (22).

Based on the preceding, the potential for the project to result in or cause adverse CO "hotspots" is considered less-than-significant.

3.7 AQMP

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance the indicators discussed below:

3.7.1 CONSISTENCY CRITERION NO. 1

Local land use plans and/or population projections

The existing General Plan Land Use designation of the Project site is "General Commercial" (C2). The Project uses are allowed under the site's existing C2 General Plan Land Use designation. The Project does not propose or require a General Plan Amendment affecting the Project site or any off-site City of Hesperia properties. The C2 land use designation allows for a maximum FAR of 1.0, the proposed Project site has a FAR of 0.376 which is in conformance with the C2 land use designation. The C2 land use designation is intended for goods and services of general nature, as well as professional offices that meet both short and long term needs of the City's population (23). The Project Applicant proposes land uses that are consistent with development anticipated under the site's existing General Plan designation. The Project would therefore conform to local land use plans.

3.7.4 CONSISTENCY CRITERION NO. 2

All MDAQMD Rules and Regulations

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visibile Emissions), 402 (Nuisance), and 403 (Fugitive Dust).

3.7.3 CONSISTENCY CRITERION NO. 3

Demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards

Consistency Criterion No. 3 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional significance thresholds were exceeded. As evaluated, the Project's regional construction and operational emissions would not exceed applicable regional significance thresholds. As such, a less than significant impact is expected.

AQMP CONSISTENCY CONCLUSION

The Project would not have the potential to result in or cause NAAQS or CAAQS violations. Additionally, Project construction and operational-source emissions would not exceed the regional or localized significance thresholds. Further, the Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The Project is therefore considered to be consistent with the AQMP.

3.8 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

As per the MDAQMD's *Guidelines*, the following project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors (18):

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

As the Project consists of approximately 499,700 sf of warehousing use, the potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors.

Receptors in the Project study area are described below and shown on Exhibit 3-A. All distances are measured from the Project sites boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project sites. The selection of receptor locations

is based on Federal Highway Administration (FHWA) guidelines and is consistent with additional guidance provided by Caltrans and the Federal Transit Administration (FTA). Distance is measured in a straight line from the project boundary to each receptor location.

R1: Location R1 represents the existing residence at 13030 Avenal Street, approximately 71 feet north of the Project site. R1 is placed in the private outdoor living areas (backyard) facing the Project site.

R2: Location R2 represents the existing residence at 13164 Avenal Road, approximately 76 feet north of the Project site. R2 is placed in the private outdoor living areas (backyard) facing the Project site.

R3: Location R3 represents the existing residence at 10445 Avenal Street, approximately 1,263 feet east of the Project site. R3 is placed in the private outdoor living areas (backyard) facing the Project site.

R4: Location R4 represents the existing residence at 13500 Live Oak Street, approximately 1,071 feet southeast of the Project site Since there are no private outdoor living areas (backyards) facing the Project site, receptor R4 is placed at the residential building façade.

R5: Location R5 represents the existing residence at 10376 Wellington Road, approximately 227 feet north of the Project site. R5 is placed in the private outdoor living areas (backyard) facing the Project site.

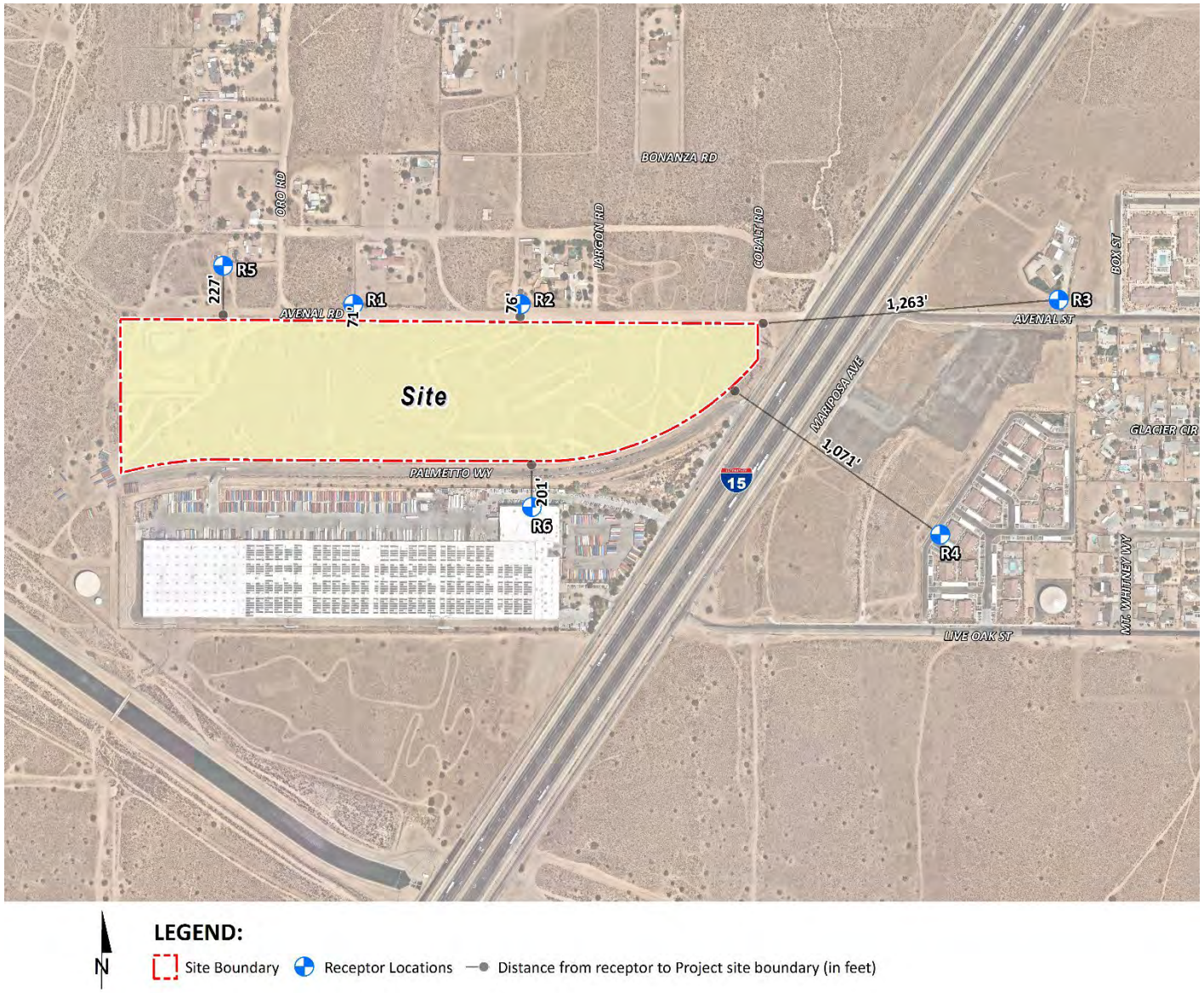
R6: Location R6 represents MGA Entertainment, Inc., located at 10200 Amargosa Road, approximately 201 feet south of the Project site.

Based on Exhibit 3-A, and as described above, the nearest sensitive receptor is a residence at 13030 Avenal Street, approximately 71 feet north of the Project site.

The Project would have a potentially significant health risk impact if it results in a maximum incremental cancer risk from emission of Toxic Air Contaminants (TACs) of ≥ 10 in one million and/or a chronic & acute hazard index that is ≥1.0. In the case of the Project, the TAC of concern is diesel particulate matter (DPM) that could be generated by Project construction activities, and on-site and off-site DPM that would result from on-going Project operations.

For purposes of this evaluation, a Health Risk Assessment (HRA) has been prepared by Urban Crossroads, Inc. under a separate cover. The results of the *Amargosa and Palmetto High-Cube Warehouse Mobile Source Health Risk Assessment* (Urban Crossroads, Inc.) indicate that the Project would not result in any potentially significant health risk impacts from exposure to DPM emissions (24).

EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS



3.9 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not propose or require land uses that would be substantive sources of objectionable odors. Potential temporary and intermittent odors may result from construction equipment exhaust, the application of asphalt and architectural coatings, Temporary and intermittent construction-source emissions are controlled through existing requirements and industry Best Management Practices (BMPs) addressing proper storage of and application construction materials.

Over the life of the Project, odors may result from storage of municipal solid waste pending its transport to area landfills. . Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City of Hesperia's solid waste regulations.

The Project would also be required to comply with MDAQMD Rule 402. Rule 402 provides that "[a] person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." (25). Based on the preceding, the potential for the Project to create objectionable odors affecting a substantial number of people is considered less-than-significant.

3.10 CUMULATIVE IMPACTS

The MDAQMD relies on the SCAQMD guidance for determining cumulative impacts. The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects.

The SCAQMD published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (26). In this report the SCAQMD clearly states (Page D-3):

> *"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

Consistent with above SCAQMD guidance, Project operational or construction emissions that do not exceed the MDAQMD's project-specific thresholds would not cause a cumulatively considerable increase in emissions for those pollutants for which MDAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Conversely, Project construction and operational emissions that exceed MDAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

CONSTRUCTION IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions would not result in exceedances of MDAQMD thresholds. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

OPERATIONAL IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project operational-source air pollutant emissions would not result in exceedances of MDAQMD thresholds. Therefore, Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

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5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

Haseeb Qureshi
Associate Principal
Urban Crossroads, Inc.
hqureshi@urbanxroads.com

EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

APPENDIX C

MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

APPENDIX C

MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Ambient Air Quality Standards

(Updated 5/4/16)

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$)as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

FIGURE 1


2020
Area Designations for State
Ambient Air Quality Standards
OZONE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Sutter Buttes
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Nonattainment-Transitional
Nonattainment
Air Basin
County
Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 1

California Ambient Air Quality Standards
Area Designations for Ozone [1]

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			X	
Inyo County	X			
Mono County	X			
LAKE COUNTY AIR BASIN				X
LAKE TAHOE AIR BASIN				X
MOJAVE DESERT AIR BASIN	X			
MOUNTAIN COUNTIES AIR BASIN				
Amador County		X		
Calaveras County	X			
El Dorado County (portion)	X			
Mariposa County	X			
Nevada County	X			
Placer County (portion)	X			
Plumas County			X	
Sierra County			X	
Tuolumne County	X			
NORTH CENTRAL COAST AIR BASIN				X
NORTH COAST AIR BASIN				X

	N	NA-T	U	A
NORTHEAST PLATEAU AIR BASIN				X
SACRAMENTO VALLEY AIR BASIN				
Colusa and Glenn Counties				X
Shasta County		X		
Sutter/Yuba Counties				
Sutter Buttes	X			
Remainder of Sutter County	X			
Yuba County	X			
Yolo/Solano Counties		X		
Remainder of Air Basin	X			
SALTON SEA AIR BASIN	X			
SAN DIEGO AIR BASIN	X			
SAN FRANCISCO BAY AREA AIR BASIN	X			
SAN JOAQUIN VALLEY AIR BASIN	X			
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County	X			
Santa Barbara County	X			
Ventura County	X			
SOUTH COAST AIR BASIN	X			

[1] AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

FIGURE 2


2020
Area Designations for State
Ambient Air Quality Standards
PM10
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
Yosemite NP
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
Imperial
San Diego
SAN DIEGO
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 2

California Ambient Air Quality Standards
Area Designation for Suspended Particulate Matter (PM_{10})

	N	U	A
GREAT BASIN VALLEYS AIR BASIN	X		
LAKE COUNTY AIR BASIN			X
LAKE TAHOE AIR BASIN	X		
MOJAVE DESERT AIR BASIN	X		
MOUNTAIN COUNTIES AIR BASIN			
Amador County		X	
Calaveras County	X		
El Dorado County (portion)	X		
Mariposa County			
- Yosemite National Park	X		
- Remainder of County		X	
Nevada County	X		
Placer County (portion)	X		
Plumas County	X		
Sierra County	X		
Tuolumne County		X	

	N	U	A
NORTH CENTRAL COAST AIR BASIN	X		
NORTH COAST AIR BASIN			
Del Norte, Sonoma (portion) and Trinity Counties			X
Remainder of Air Basin	X		
NORTHEAST PLATEAU AIR BASIN			
Siskiyou County			X
Remainder of Air Basin		X	
SACRAMENTO VALLEY AIR BASIN			
Shasta County			X
Remainder of Air Basin	X		
SALTON SEA AIR BASIN	X		
SAN DIEGO AIR BASIN	X		
SAN FRANCISCO BAY AREA AIR BASIN	X		
SAN JOAQUIN VALLEY AIR BASIN	X		
SOUTH CENTRAL COAST AIR BASIN	X		
SOUTH COAST AIR BASIN	X		

FIGURE 3


2020
Area Designations for State
Ambient Air Quality Standards
PM2.5
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Portola Valley
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
County Portion of Federal Ozone AQMA
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Calexico
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 3

California Ambient Air Quality Standards
Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			X
LAKE COUNTY AIR BASIN			X
LAKE TAHOE AIR BASIN			X
MOJAVE DESERT AIR BASIN			
San Bernardino County			
- County portion of federal Southeast Desert Modified AQMA for Ozone[1]			X
Remainder of Air Basin			X
MOUNTAIN COUNTIES AIR BASIN			
Plumas County			
- Portola Valley[2]	X		
Remainder of Air Basin		X	
NORTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X
SACRAMENTO VALLEY AIR BASIN			
Butte County	X		
Colusa County			X
Glenn County			X
Placer County (portion)			X
Sacramento County			X
Shasta County			X
Sutter and Yuba Counties			X
Remainder of Air Basin		X	

	N	U	A
SALTON SEA AIR BASIN			
Imperial County			
- City of Calexico[3]	X		
Remainder of Air Basin			X
SAN DIEGO AIR BASIN	X		
SAN FRANCISCO BAY AREA AIR BASIN	X		
SAN JOAQUIN VALLEY AIR BASIN	X		
SOUTH CENTRAL COAST AIR BASIN			
San Luis Obispo County			X
Santa Barbara County		X	
Ventura County			X
SOUTH COAST AIR BASIN	X		

[1] California Code of Regulations, title 17, section 60200(b)

[2] California Code of Regulations, title 17, section 60200(c)

[3] California Code of Regulations, title 17, section 60200(a)

FIGURE 4

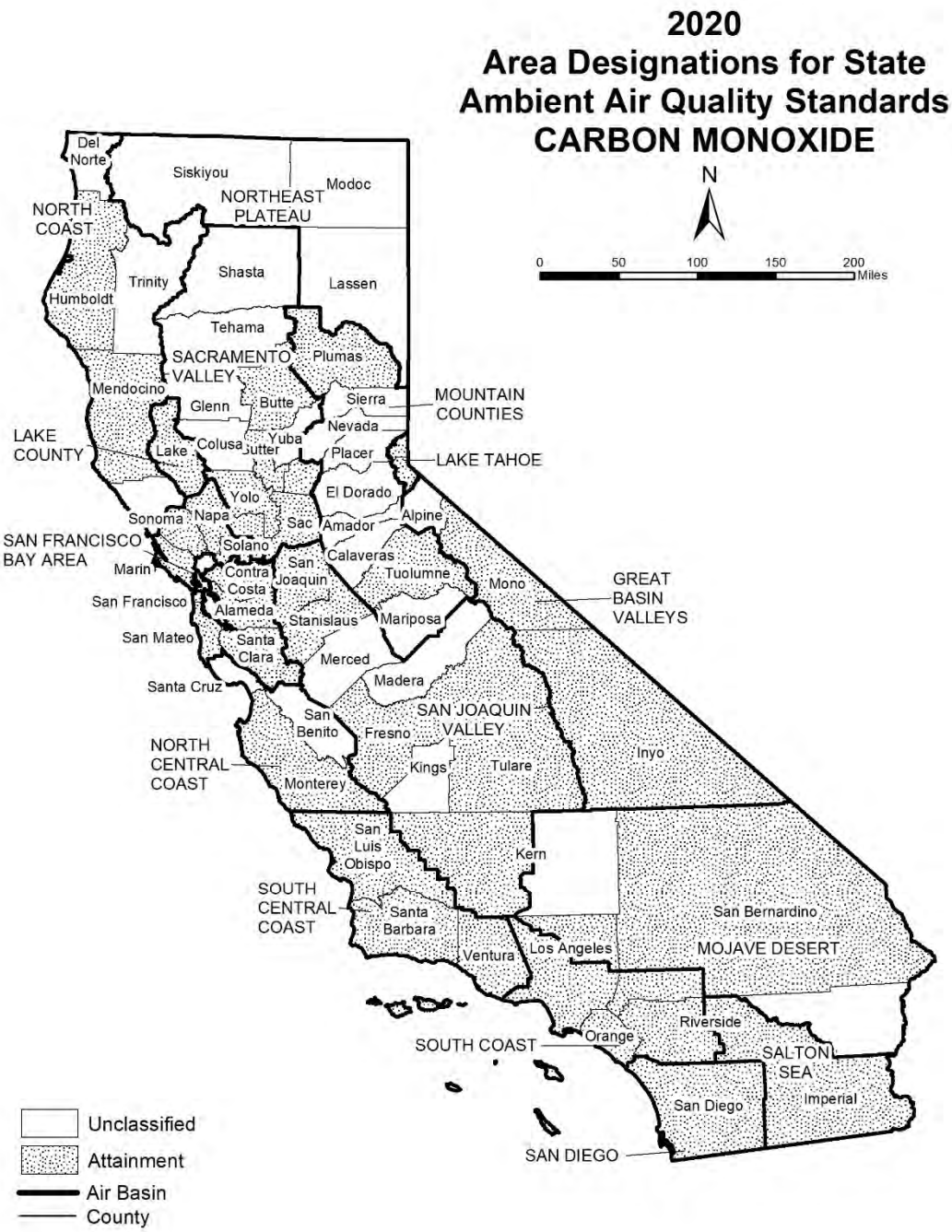

2020
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
SAN JOAQUIN VALLEY
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 4

California Ambient Air Quality Standards
Area Designation for Carbon Monoxide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			X	
Inyo County				X
Mono County				X
LAKE COUNTY AIR BASIN				X
LAKE TAHOE AIR BASIN				X
MOJAVE DESERT AIR BASIN				
Kern County (portion)			X	
Los Angeles County (portion)				X
Riverside County (portion)			X	
San Bernardino County (portion)				X
MOUNTAIN COUNTIES AIR BASIN				
Amador County			X	
Calaveras County			X	
El Dorado County (portion)			X	
Mariposa County			X	
Nevada County			X	
Placer County (portion)			X	
Plumas County				X
Sierra County			X	
Tuolumne County				X
NORTH CENTRAL COAST AIR BASIN				
Monterey County				X
San Benito County			X	
Santa Cruz County			X	
NORTH COAST AIR BASIN				
Del Norte County			X	
Humboldt County				X
Mendocino County				X
Sonoma County (portion)			X	
Trinity County			X	
NORTHEAST PLATEAU AIR BASIN			X	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN				
Butte County				X
Colusa County			X	
Glenn County			X	
Placer County (portion)				X
Sacramento County				X
Shasta County			X	
Solano County (portion)				X
Sutter County				X
Tehama County			X	
Yolo County				X
Yuba County			X	
SALTON SEA AIR BASIN				X
SAN DIEGO AIR BASIN				X
SAN FRANCISCO BAY AREA AIR BASIN				X
SAN JOAQUIN VALLEY AIR BASIN				
Fresno County				X
Kern County (portion)				X
Kings County			X	
Madera County			X	
Merced County			X	
San Joaquin County				X
Stanislaus County				X
Tulare County				X
SOUTH CENTRAL COAST AIR BASIN				X
SOUTH COAST AIR BASIN				X

* The area designated for carbon monoxide is a county or portion of a county

FIGURE 5


2020
Area Designations for State
Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
CA 60 (Portion)
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Calexico
Los Angeles
San Bernardino
CA 60 (Portion)
Riverside
Orange
Attainment
Nonattainment
Air Basin
County
Last Updated: October 2020
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TABLE 5

California Ambient Air Quality Standards
Area Designations for Nitrogen Dioxide

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			X
LAKE COUNTY AIR BASIN			X
LAKE TAHOE AIR BASIN			X
MOJAVE DESERT AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X

	N	U	A
SACRAMENTO VALLEY AIR BASIN			X
SALTON SEA AIR BASIN			X
SAN DIEGO AIR BASIN			X
SAN FRANCISCO BAY AREA AIR BASIN			X
SAN JOAQUIN VALLEY AIR BASIN			X
SOUTH CENTRAL COAST AIR BASIN			X
SOUTH COAST AIR BASIN			
CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties	X		
Remainder of Air Basin			X

FIGURE 6


2020
Area Designations for State
Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2020
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TABLE 6

California Ambient Air Quality Standards
Area Designation for Sulfur Dioxide*

	N	A
GREAT BASIN VALLEYS AIR BASIN		X
LAKE COUNTY AIR BASIN		X
LAKE TAHOE AIR BASIN		X
MOJAVE DESERT AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X

	N	A
SACRAMENTO VALLEY AIR BASIN		X
SALTON SEA AIR BASIN		X
SAN DIEGO AIR BASIN		X
SAN FRANCISCO BAY AREA AIR BASIN		X
SAN JOAQUIN VALLEY AIR BASIN		X
SOUTH CENTRAL COAST AIR BASIN		X
SOUTH COAST AIR BASIN		X

* The area designated for sulfur dioxide is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

FIGURE 7


2020
Area Designations for State
Ambient Air Quality Standards
SULFATES
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 7

California Ambient Air Quality Standards
Area Designation for Sulfates

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			X
LAKE COUNTY AIR BASIN			X
LAKE TAHOE AIR BASIN			X
MOJAVE DESERT AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X

	N	U	A
SACRAMENTO VALLEY AIR BASIN			X
SALTON SEA AIR BASIN			X
SAN DIEGO AIR BASIN			X
SAN FRANCISCO BAY AREA AIR BASIN			X
SAN JOAQUIN VALLEY AIR BASIN			X
SOUTH CENTRAL COAST AIR BASIN			X
SOUTH COAST AIR BASIN			X

FIGURE 8


2020
Area Designations for State
Ambient Air Quality Standards
LEAD
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
San Benito
Fresno
SAN JOAQUIN VALLEY
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 8

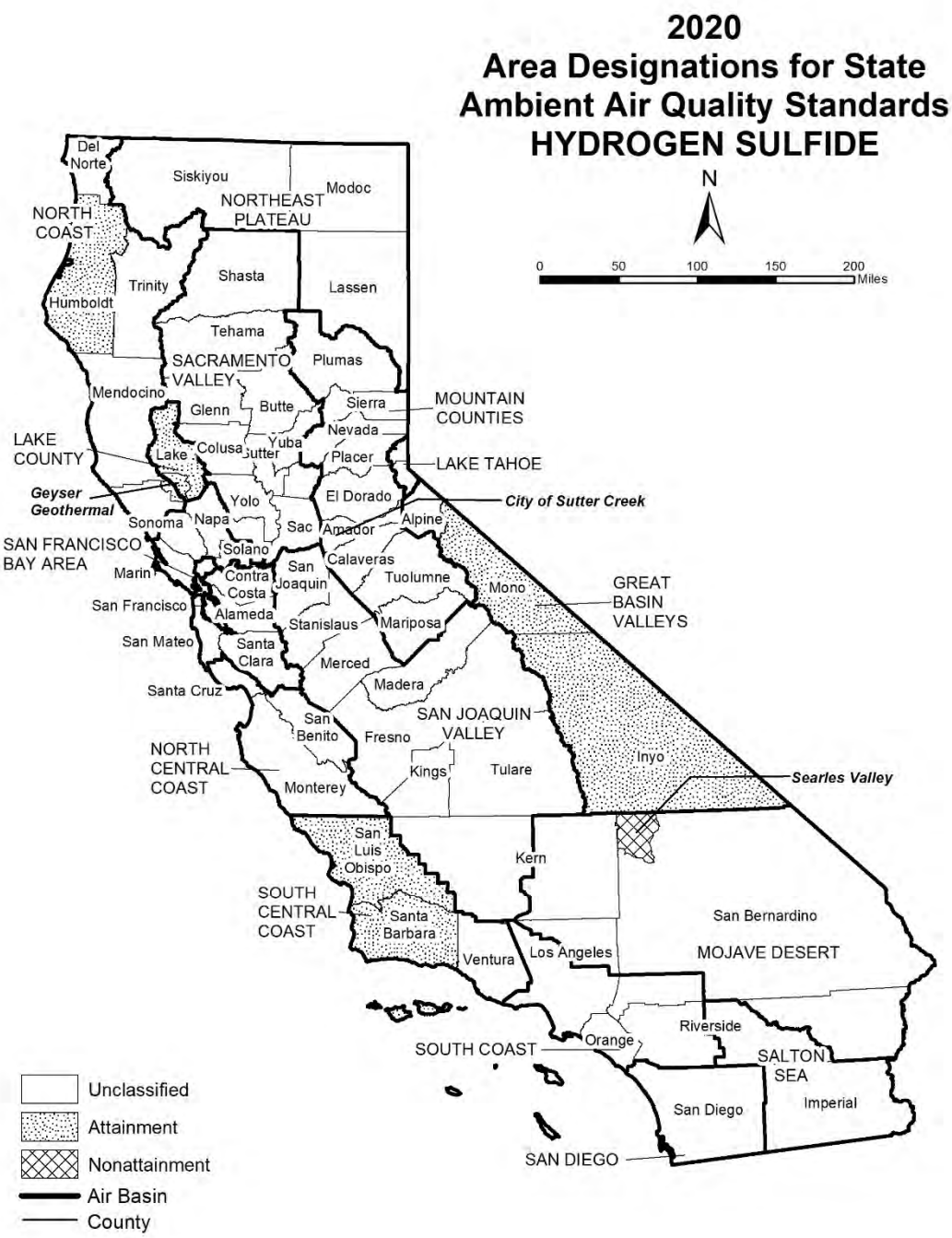
California Ambient Air Quality Standards
Area Designations for Lead (particulate)*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			X
LAKE COUNTY AIR BASIN			X
LAKE TAHOE AIR BASIN			X
MOJAVE DESERT AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X
SACRAMENTO VALLEY AIR BASIN			X

	N	U	A
SALTON SEA AIR BASIN			X
SAN DIEGO AIR BASIN			X
SAN FRANCISCO BAY AREA AIR BASIN			X
SAN JOAQUIN VALLEY AIR BASIN			X
SOUTH CENTRAL COAST AIR BASIN			X
SOUTH COAST AIR BASIN			X

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

FIGURE 9



Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 9

California Ambient Air Quality Standards
Area Designation for Hydrogen Sulfide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			X	
Inyo County				X
Mono County				X
LAKE COUNTY AIR BASIN				X
LAKE TAHOE AIR BASIN			X	
MOJAVE DESERT AIR BASIN				
Kern County (portion)			X	
Los Angeles County (portion)			X	
Riverside County (portion)			X	
San Bernardino County (portion)				
- Searles Valley Planning Area[1]	X			
- Remainder of County			X	
MOUNTAIN COUNTIES AIR BASIN				
Amador County				
- City of Sutter Creek	X			
- Remainder of County			X	
Calaveras County			X	
El Dorado County (portion)			X	
Mariposa County			X	
Nevada County			X	
Placer County (portion)			X	
Plumas County			X	
Sierra County			X	
Tuolumne County			X	

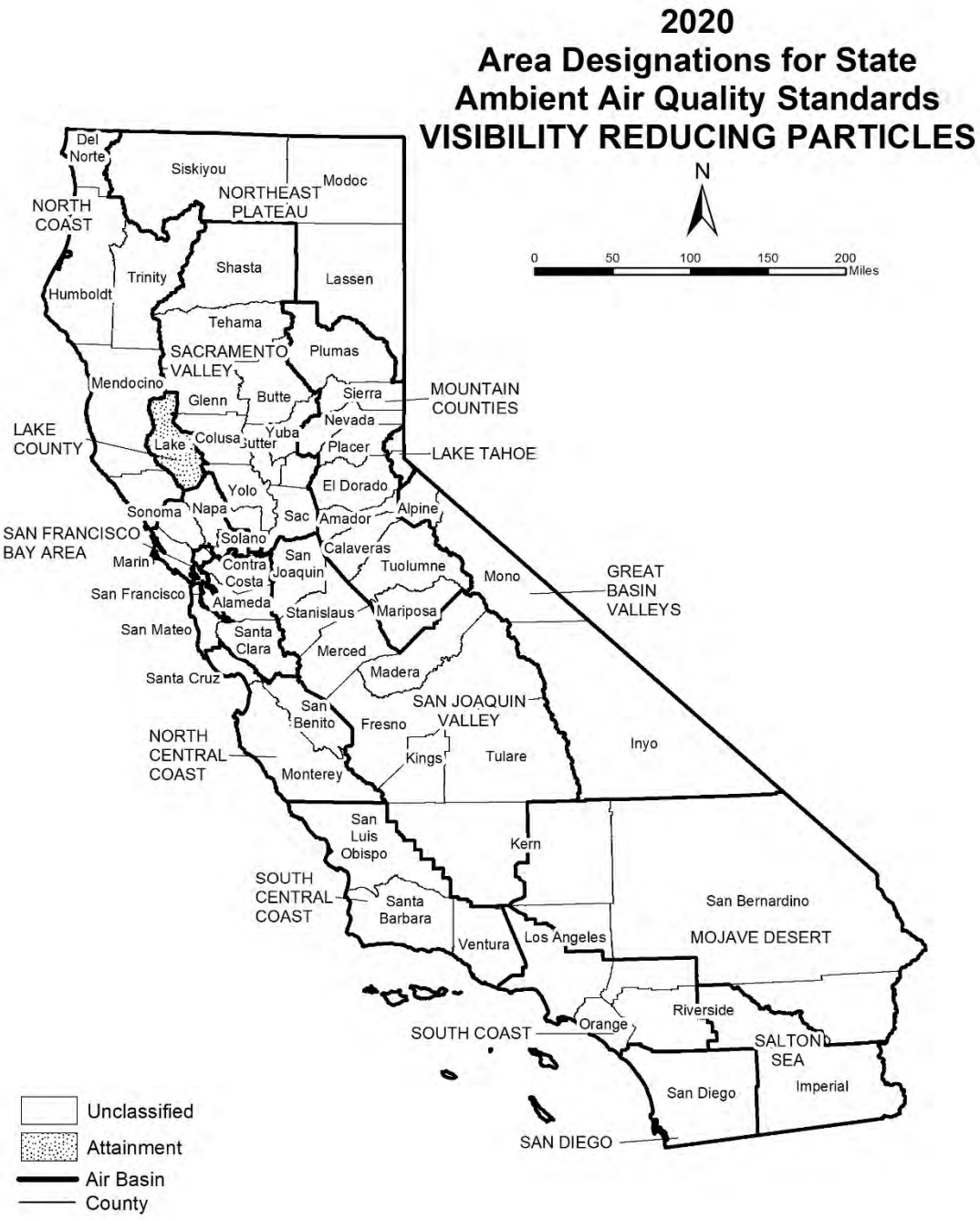
	N	NA-T	U	A
NORTH CENTRAL COAST AIR BASIN			X	
NORTH COAST AIR BASIN				
Del Norte County			X	
Humboldt County				X
Mendocino County			X	
Sonoma County (portion)				
- Geyser Geothermal Area[2]				X
- Remainder of County			X	
Trinity County			X	
NORTHEAST PLATEAU AIR BASIN			X	
SACRAMENTO VALLEY AIR BASIN			X	
SALTON SEA AIR BASIN			X	
SAN DIEGO AIR BASIN			X	
SAN FRANCISCO BAY AREA AIR BASIN			X	
SAN JOAQUIN VALLEY AIR BASIN			X	
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County				X
Santa Barbara County				X
Ventura County			X	
SOUTH COAST AIR BASIN			X	

* The area designated for hydrogen sulfide is a county or portion of a county

[1] 52 Federal Register 29384 (August 7, 1987)

[2] California Code of Regulations, title 17, section 60200(d)

FIGURE 10



Last Updated: October 2020
Air Quality Planning and Science Division, CARB

TABLE 10

California Ambient Air Quality Standards
Area Designation for Visibility Reducing Particles

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN			X	
LAKE COUNTY AIR BASIN				X
LAKE TAHOE AIR BASIN			X	
MOJAVE DESERT AIR BASIN			X	
MOUNTAIN COUNTIES AIR BASIN			X	
NORTH CENTRAL COAST AIR BASIN			X	
NORTH COAST AIR BASIN			X	
NORTHEAST PLATEAU AIR BASIN			X	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN			X	
SALTON SEA AIR BASIN			X	
SAN DIEGO AIR BASIN			X	
SAN FRANCISCO BAY AREA AIR BASIN			X	
SAN JOAQUIN VALLEY AIR BASIN			X	
SOUTH CENTRAL COAST AIR BASIN			X	
SOUTH COAST AIR BASIN			X	

Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. EPA website:

https://www.epa.gov/green-book

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

https://www.epa.gov/criteria-air-pollutants

Designation Categories

Suspended Particulate Matter (PM_{10}). The U.S. EPA uses three categories to designate areas with respect to PM_{10}:

- Attainment (A)
- Nonattainment (N)
- Unclassifiable (U)

Ozone, Fine Suspended Particulate Matter ($PM_{2.5}$), Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment (N)
- Unclassifiable/Attainment (U/A)

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Area designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary $PM_{2.5}$ standard of 12.0 µg/m^3. Area designations were finalized in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 µg/m^3 as well as the 24-hour standard of 35 µg/m^3, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO_2 standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO_2 standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO_2). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment (N),
- Unclassifiable (U), and
- Unclassifiable/Attainment (U/A).

On June 2, 2010, the U.S. EPA established a new primary 1-hour SO_2 standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual

average standards. Area designations for the 1-hour SO_2 standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15 µg/m^3. Designations were made for this standard in November 2010.

Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at:

https://ecfr.io/Title-40/se40.20.81_1305

FIGURE 11

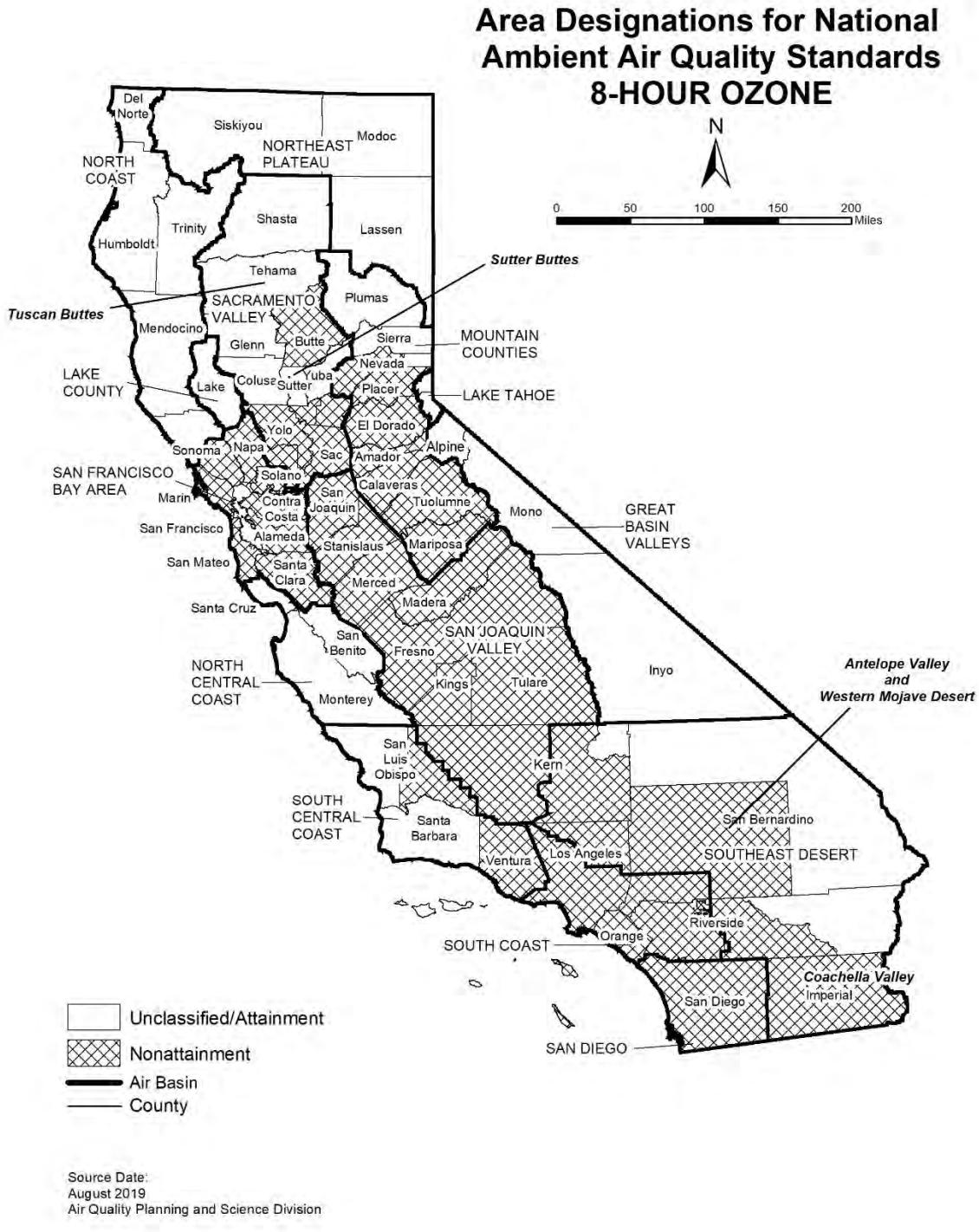

Area Designations for National Ambient Air Quality Standards
8-HOUR OZONE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Sutter Buttes
Tuscan Buttes
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Sutter
Lake
Placer
LAKE TAHOE
El Dorado
Yolo
Alpine
Sonoma
Napa
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
SAN JOAQUIN VALLEY
Fresno
Inyo
Antelope Valley and Western Mojave Desert
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
SOUTHEAST DESERT
Riverside
Orange
SOUTH COAST
Coachella Valley
Imperial
San Diego
SAN DIEGO
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
August 2019
Air Quality Planning and Science Division

TABLE 11

National Ambient Air Quality Standards
Area Designations for 8-Hour Ozone*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		X
LAKE COUNTY AIR BASIN		X
LAKE TAHOE AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		
Amador County	X	
Calaveras County	X	
El Dorado County (portion)[1]	X	
Mariposa County	X	
Nevada County		
- Western Nevada County	X	
- Remainder of County		X
Placer County (portion)[1]	X	
Plumas County		X
Sierra County		X
Tuolumne County	X	
NORTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X
SACRAMENTO VALLEY AIR BASIN		
Butte County	X	
Colusa County		X
Glenn County		X
Sacramento Metro Area[1]	X	
Shasta County		X
Sutter County		
- Sutter Buttes	X	
- Southern portion of Sutter County[1]	X	
- Remainder of Sutter County		X
Tehama County		
- Tuscan Buttes	X	
- Remainder of Tehama County		X

	N	U/A
SACRAMENTO VALLEY AIR BASIN (cont.)		
Yolo County[1]	X	
Yuba County		X
SAN DIEGO COUNTY	X	
SAN FRANCISCO BAY AREA AIR BASIN	X	
SAN JOAQUIN VALLEY AIR BASIN	X	
SOUTH CENTRAL COAST AIR BASIN[2]		
San Luis Obispo County		
- Eastern San Luis Obispo County	X	
- Remainder of County		X
Santa Barbara County		X
Ventura County		
- Area excluding Anacapa and San Nicolas Islands	X	
- Channel Islands[2]		X
SOUTH COAST AIR BASIN[2]	X	
SOUTHEAST DESERT AIR BASIN		
Kern County (portion)	X	
- Indian Wells Valley		X
Imperial County	X	
Los Angeles County (portion)	X	
Riverside County (portion)		
- Coachella Valley	X	
- Non-AQMA portion		X
San Bernardino County		
- Western portion (AQMA)	X	
- Eastern portion (non-AQMA)		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and table reflect the 2015 8-hour ozone standard of 0.070 ppm.

[1] For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

[2] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
South Coast Air Basin:
Los Angeles County includes San Clemente and Santa Catalina Islands.

FIGURE 12


Area Designations for National Ambient Air Quality Standards PM10
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehema
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Alpine
Sacramento County
Sonoma
Napa
Sac
Amador
SAN FRANCISCO BAY AREA
Marin
Solano
Calaveras
Mono
Mono Basin
San Joaquin
Contra Costa
Tuolumne
Mammoth Lake
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Inyo
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Owens Valley
Coso Junction
Trona
NORTH CENTRAL COAST
Monterey
Kings
Tulare
San Luis Obispo
Kern
Indian Wells Valley
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
Ventura
Los Angeles
SOUTHEAST DESERT
Riverside
Coachella Valley
Orange
SOUTH COAST
Imperial
San Diego
SAN DIEGO COUNTY
Unclassified
Attainment
Nonattainment
Air Basin
County
Source Date:
October 2020
Air Quality Planning and Science Division

TABLE 12

National Ambient Air Quality Standards
Area Designations for Suspended Particulate Matter (PM_{10})*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			
Alpine County		X	
Inyo County			
- Owens Valley Planning Area	X		
- Coso Junction			X
- Remainder of County		X	
Mono County			
- Mammoth Lake Planning Area			X
- Mono Lake Basin	X		
- Remainder of County		X	
LAKE COUNTY AIR BASIN		X	
LAKE TAHOE AIR BASIN		X	
MOUNTAIN COUNTIES AIR BASIN			
Placer County (portion)[1]		X	
Remainder of Air Basin		X	
NORTH CENTRAL COAST AIR BASIN		X	
NORTH COAST AIR BASIN		X	
NORTHEAST PLATEAU AIR BASIN		X	
SACRAMENTO VALLEY AIR BASIN			
Butte County		X	
Colusa County		X	
Glenn County		X	
Placer County (portion)[1]		X	
Sacramento County[2]			X
Shasta County		X	
Solano County (portion)		X	
Sutter County		X	
Tehama County		X	
Yolo County		X	
Yuba County		X	

	N	U	A
SAN DIEGO COUNTY		X	
SAN FRANCISCO BAY AREA AIR BASIN		X	
SAN JOAQUIN VALLEY AIR BASIN			X
SOUTH CENTRAL COAST AIR BASIN		X	
SOUTH COAST AIR BASIN			X
SOUTHEAST DESERT AIR BASIN			
Eastern Kern County			
- Indian Wells Valley			X
- Portion within San Joaquin Valley Planning Area	X		
- Remainder of County		X	
Imperial County			
- Imperial Valley Planning Area[3]			X
- Remainder of County		X	
Los Angeles County (portion)		X	
Riverside County (portion)			
- Coachella Valley[4]	X		
- Non-AQMA portion		X	
San Bernardino County			
- Trona	X		
- Remainder of County	X		

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

[1] U.S. EPA designation puts the Sacramento Valley Air Basin portion of Placer County in the Mountain Counties Air Basin.

[2] Air quality in Sacramento County meets the national PM_{10} standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

[3] The request for redesignation to attainment for the Imperial Valley Planning Area was approved by U.S. EPA and in September 2020, effective October 2020.

[4] Air quality in Coachella Valley meets the national PM_{10} standards. A request for redesignation to attainment has been submitted to U.S. EPA.

FIGURE 13


Area Designations for National Ambient Air Quality Standards PM2.5
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTH COAST
NORTHEAST PLATEAU
Humboldt
Trinity
Shasta
Lassen
Tehama
SACRAMENTO VALLEY
Plumas
Butte
Glenn
Sierra
MOUNTAIN COUNTIES
Mendocino
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sacramento
Alpine
Amador
Solano
Calaveras
SAN FRANCISCO BAY AREA
Marin
Tuolumne
GREAT BASIN VALLEYS
Contra Costa
San Joaquin
Mono
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
NORTH CENTRAL COAST
San Benito
SAN JOAQUIN VALLEY
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
SOUTHEAST DESERT
Ventura
Los Angeles
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
August 2019
Air Quality Planning and Science Division

TABLE 13

National Ambient Air Quality Standards
Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		X
LAKE COUNTY AIR BASIN		X
LAKE TAHOE AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		
Plumas County		
- Portola Valley Portion of Plumas	X	
- Remainder of Plumas County		X
Remainder of Air Basin		X
NORTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X
SACRAMENTO VALLEY AIR BASIN		
Sacramento Metro Area[1]	X	
Sutter County		X
Yuba County (portion)		X
Remainder of Air Basin		X

	N	U/A
SAN DIEGO COUNTY		X
SAN FRANCISCO BAY AREA AIR BASIN[2]	X	
SAN JOAQUIN VALLEY AIR BASIN	X	
SOUTH CENTRAL COAST AIR BASIN		X
SOUTH COAST AIR BASIN[3]	X	
SOUTHEAST DESERT AIR BASIN		
Imperial County (portion)[4]	X	
Remainder of Air Basin		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour $PM_{2.5}$ standard as well as the 1997 and 2012 $PM_{2.5}$ annual standards.

[1] For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[2] Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[3] Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

[4] That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

FIGURE 14


Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
August 2019
Air Quality Planning and Science Division

TABLE 14

National Ambient Air Quality Standards
Area Designations for Carbon Monoxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		X
LAKE COUNTY AIR BASIN		X
LAKE TAHOE AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X

	N	U/A
SACRAMENTO VALLEY AIR BASIN		X
SAN DIEGO COUNTY		X
SAN FRANCISCO BAY AREA AIR BASIN		X
SAN JOAQUIN VALLEY AIR BASIN		X
SOUTH CENTRAL COAST AIR BASIN		X
SOUTH COAST AIR BASIN		X
SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 15


Area Designations for National Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
Colusa
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Los Angeles
San Bernardino
Ventura
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
August 2019
Air Quality Planning and Science Division

TABLE 15

National Ambient Air Quality Standards
Area Designations for Nitrogen Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		X
LAKE COUNTY AIR BASIN		X
LAKE TAHOE AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X

	N	U/A
SACRAMENTO VALLEY AIR BASIN		X
SAN DIEGO COUNTY		X
SAN FRANCISCO BAY AREA AIR BASIN		X
SAN JOAQUIN VALLEY AIR BASIN		X
SOUTH CENTRAL COAST AIR BASIN		X
SOUTH COAST AIR BASIN		X
SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 16



Source Date:
August 2019
Air Quality Planning and Science Division

TABLE 16

National Ambient Air Quality Standards
Area Designations for Sulfur Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		X
LAKE COUNTY AIR BASIN		X
LAKE TAHOE AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X
SACRAMENTO VALLEY AIR BASIN		X
SAN DIEGO COUNTY		X
SAN FRANCISCO BAY AREA AIR BASIN		X
SAN JOAQUIN VALLEY AIR BASIN		
Fresno County		X
Kern County (portion)		X
Kings County		X
Madera County		X
Merced County		X
San Joaquin County		X
Stanislaus County		X
Tulare County		X

	N	U/A
SOUTH CENTRAL COAST AIR BASIN		
San Luis Obispo County		X
Santa Barbara County		X
Ventura County		X
Channel Islands[1]		X
SOUTH COAST AIR BASIN		X
SOUTHEAST DESERT AIR BASIN		
Imperial County		X
Remainder of Air Basin		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and table reflect the 2010 1-hour SO_2 standard of 75 ppb.

[1] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

FIGURE 17


Area Designations for National Ambient Air Quality Standards
LEAD
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
August 2019
Air Quality Planning and Science Division

TABLE 17

National Ambient Air Quality Standards
Area Designations for Lead (particulate)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		X
LAKE COUNTY AIR BASIN		X
LAKE TAHOE AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X
SACRAMENTO VALLEY AIR BASIN		X

	N	U/A
SAN DIEGO COUNTY		X
SAN FRANCISCO BAY AREA AIR BASIN		X
SAN JOAQUIN VALLEY AIR BASIN		X
SOUTH CENTRAL COAST AIR BASIN		X
SOUTH COAST AIR BASIN		
Los Angeles County (portion)[1]	X	
Remainder of Air Basin		X
SOUTHEAST DESERT AIR BASIN		X

[1] Portion of County in Air Basin, not including Channel Islands

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APPENDIX 3.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial (Construction) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Construction)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.83	4.90	47.0	38.0	0.05	2.53	—	2.53	2.33	—	2.33	—	5,530	5,530	0.22	0.04	—	5,549
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.67	1.35	< 0.005	0.09	—	0.09	0.08	—	0.08	—	197	197	0.01	< 0.005	—	198
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	32.6	32.6	< 0.005	< 0.005	—	32.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.12	1.15	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	235	235	0.01	0.01	0.03	238
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	132	132	< 0.005	0.02	0.01	137
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	8.63	8.63	< 0.005	< 0.005	0.02	8.75

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.70	4.70	< 0.005	< 0.005	0.01	4.90
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.82	3.85	0.01	0.23	—	0.23	0.21	—	0.21	—	791	791	0.03	0.01	—	794

Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.88	0.70	< 0.005	0.04	—	0.04	0.04	—	0.04	—	131	131	0.01	< 0.005	—	131
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.32	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	269	269	0.01	0.01	0.03	272
Vendor	0.02	0.02	0.56	0.26	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	495	495	< 0.005	0.07	0.03	515
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	62.7	62.7	< 0.005	0.01	< 0.005	65.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.17	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	32.6	32.6	< 0.005	< 0.005	0.06	33.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	58.3	58.3	< 0.005	0.01	0.07	60.7
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.38	7.38	< 0.005	< 0.005	0.01	7.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	5.40	5.40	< 0.005	< 0.005	0.01	5.48
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.65	9.65	< 0.005	< 0.005	0.01	10.1

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.5. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.56	7.32	0.01	0.31	—	0.31	0.28	—	0.28	—	1,347	1,347	0.05	0.01	—	1,352
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.20	1.34	< 0.005	0.06	—	0.06	0.05	—	0.05	—	223	223	0.01	< 0.005	—	224
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.46	1.27	1.30	20.6	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	3,193	3,193	0.13	0.10	13.5	3,240
Vendor	0.10	0.08	2.23	1.07	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,078	2,078	< 0.005	0.28	5.51	2,168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.23	1.12	1.39	13.8	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	2,823	2,823	0.14	0.10	0.35	2,858
Vendor	0.10	0.07	2.36	1.09	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,080	2,080	< 0.005	0.28	0.14	2,165
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.58	0.76	7.93	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,490	1,490	0.07	0.05	2.97	1,510
Vendor	0.05	0.04	1.21	0.55	0.01	0.01	0.06	0.07	0.01	0.02	0.04	—	1,065	1,065	< 0.005	0.15	1.22	1,110
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.45	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	247	247	0.01	0.01	0.49	250
Vendor	0.01	0.01	0.22	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	176	176	< 0.005	0.02	0.20	184
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.91	< 0.005	0.04	—	0.04	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	0.99	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.10	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	18.8	18.8	< 0.005	< 0.005	0.04	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.11	3.11	< 0.005	< 0.005	0.01	3.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.25	1.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.14	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	19.5	19.5	< 0.005	< 0.005	—	19.6
Architectural Coatings	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.23	3.23	< 0.005	< 0.005	—	3.24
Architectural Coatings	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	2.77	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.03	0.02	0.07	572
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.34	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	63.7	63.7	< 0.005	< 0.005	0.13	64.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/15/2023	2/1/2023	5.00	13.0	—
Grading	Grading	2/1/2023	3/31/2023	5.00	43.0	—
Building Construction	Building Construction	3/15/2023	11/30/2023	5.00	187	—
Paving	Paving	11/15/2023	12/30/2023	5.00	33.0	—
Architectural Coating	Architectural Coating	11/6/2023	12/30/2023	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	15.0	10.2	HHDT,MHDT

Grading	Hauling	0.88	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	210	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	63.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	42.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	786,896	262,299	49,795

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5	0.00	—
Grading	300	—	172	0.00	—
Paving	0.00	0.00	0.00	0.00	19.1

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	3.93	100%
Other Non-Asphalt Surfaces	15.1	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8
Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9

Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—

2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0

Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

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APPENDIX 3.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial (Operations) Detailed Report

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1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.2. Unmitigated

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Operations)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—
User Defined Industrial	500	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	27,622	28,096	49.0	2.32	72.7	30,086
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	26,308	26,782	49.0	2.34	1.89	28,706
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	23,582	24,056	48.9	2.09	26.7	25,929
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	3,904	3,983	8.10	0.35	4.43	4,293

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.20	4.67	13.6	62.0	0.21	0.25	5.30	5.55	0.24	0.99	1.22	—	21,482	21,482	0.43	1.73	72.7	22,082
Area	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	27,622	28,096	49.0	2.32	72.7	30,086
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.80	4.27	14.6	46.7	0.20	0.25	5.30	5.55	0.24	0.99	1.22	—	20,257	20,257	0.44	1.76	1.89	20,794
Area	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	26,308	26,782	49.0	2.34	1.89	28,706
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13	3.67	12.6	43.3	0.17	0.21	4.52	4.73	0.20	0.84	1.04	—	17,487	17,487	0.38	1.50	26.7	17,972
Area	1.90	13.2	0.09	10.7	< 0.005	0.01	—	0.01	0.02	—	0.02	—	44.1	44.1	< 0.005	< 0.005	—	45.4
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	23,582	24,056	48.9	2.09	26.7	25,929
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.75	0.67	2.30	7.90	0.03	0.04	0.82	0.86	0.04	0.15	0.19	—	2,895	2,895	0.06	0.25	4.43	2,975

Area	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Energy	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	893	893	0.08	0.01	—	896
Water	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Total	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	3,904	3,983	8.10	0.35	4.43	4,293

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.83	4.36	3.01	58.6	0.11	0.05	0.44	0.49	0.04	0.13	0.17	—	11,178	11,178	0.40	0.28	43.2	11,313
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.37	0.31	10.6	3.40	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,304	10,304	0.03	1.46	29.5	10,769
Total	5.20	4.67	13.6	62.0	0.21	0.25	1.16	1.41	0.24	0.36	0.60	—	21,482	21,482	0.43	1.73	72.7	22,082

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.45	3.98	3.35	43.3	0.10	0.05	0.44	0.49	0.04	0.13	0.17	—	9,948	9,948	0.41	0.30	1.12	10,048
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.35	0.29	11.2	3.41	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,309	10,309	0.03	1.46	0.77	10,746
Total	4.80	4.27	14.6	46.7	0.20	0.25	1.16	1.41	0.24	0.36	0.60	—	20,257	20,257	0.44	1.76	1.89	20,794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.70	0.62	0.55	7.38	0.02	0.01	0.07	0.08	0.01	0.02	0.03	—	1,442	1,442	0.06	0.04	2.63	1,459
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.06	0.05	1.76	0.52	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	1,453	1,453	< 0.005	0.21	1.80	1,516
Total	0.75	0.67	2.30	7.90	0.03	0.04	0.18	0.22	0.04	0.06	0.09	—	2,895	2,895	0.06	0.25	4.43	2,975

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,205	2,205	0.21	0.03	—	2,217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,348	2,348	0.22	0.03	—	2,361
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,205	2,205	0.21	0.03	—	2,217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,348	2,348	0.22	0.03	—	2,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.03	< 0.005	—	367
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	23.7	23.7	< 0.005	< 0.005	—	23.9
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	389	389	0.04	< 0.005	—	391

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86	3.56	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Total	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.35	0.32	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Total	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790	391	369	245,576	14,380	7,113	6,713	4,469,970
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	115	57.0	53.5	35,722	3,502	1,736	1,629	1,088,464

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	786,896	262,299	49,795

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,307,966	349	0.0330	0.0040	9,499,636
Parking Lot	149,963	349	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,555,625	5,645,327
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	470	0.00
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit

Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8

Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—

Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9

Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—

Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule

Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Dust From Material Movement	Ex
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle
Operations: Refrigerants	Unrefrigerated warehouse modeled with no refrigerant emissions

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APPENDIX B
Amargosa and Palmetto High-Cube Warehouse Mobile Source Health Risk Assessment

Amargosa and Palmetto High-Cube Warehouse

MOBILE SOURCE HEALTH RISK ASSESSMENT

CITY OF HESPERIA

PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Michael Tirohn
mtirohn@urbanxroads.com

FEBRUARY 1, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg	Microgram
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
APS	Auxiliary Power System
AQMD	Air Quality Management District
ARB	Air Resources Board
CEQA	California Environmental Quality Act
CPF	Cancer Potency Factor
DPM	Diesel Particulate Matter
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
HHD	Heavy Heavy-Duty
HI	Hazard Index
HRA	Health Risk Assessment
LHD	Light Heavy-Duty
MATES	Multiple Air Toxics Exposure Study
MDAQMD	Mojave Desert Air Quality Management District
MEIR	Maximally Exposed Individual Receptor
MEIW	Maximally Exposed Individual Worker
MHD	Medium Heavy-Duty
NAD	North American Datum
OEHHA	Office of Environmental Health Hazard Assessment
PM_{10}	Particulate Matter 10 microns in diameter or less
Project	Amargosa and Palmetto High-Cube Warehouse
REL	Reference Exposure Level
RM	Recommended Measures
SCAQMD	South Coast Air Quality Management District
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TA	Traffic Analysis
TRU	Transport Refrigeration Unit
URF	Unit Risk Factor
UTM	Universal Transverse Mercator
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

This report evaluates the potential mobile-source emissions health risk impacts associated with the development of the proposed Project. More specifically, potential health risk impacts that could result from exposure to Toxic Air Contaminants (TACs), in this case, diesel particulate matter (DPM) generated by heavy-duty diesel trucks accessing the site. This section summarizes the significance criteria and Project health risks.

The results of the health risk assessment from Project-generated DPM emissions are provided in Table ES-1, ES-2, and ES-3, presented subsequently.

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R2 which is located approximately 76 feet north the Project site at an existing residence located at 13164 Avenal Road. R2 is placed in the private outdoor living area (backyard) facing the Project site. At the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 2.13 in one million, which is less than the Mojave Desert Air Quality Management District's (MDAQMD) significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R4 which is located approximately 1,071 feet southeast of the Project site at an existing residence located at 13500 Live Oak Street. Since there are no private outdoor living areas facing the Project site, R4 is placed at the building façade nearest the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.20 in one million, which is less than the MDAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site than the MEIR analyzed herein, and TACs generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences. The nearest modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[1]*:*

The worker receptor land use with the greatest potential exposure to Project operational-source DPM emissions is Location R6, which represents the potential worker receptor approximately 201 feet south of the Project site. At the maximally exposed individual worker (MEIW), the maximum incremental cancer risk impact is 0.04 in one million which is less than the MDAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers. The nearest modeled receptors are illustrated on Exhibit 2-D.

School Child Exposure Scenario:

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on California Air Resources Board (CARB) emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1).

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

There are no schools within ¼ mile of the Project site. The nearest school is Topaz Preparatory Academy, which is located approximately 5,580 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential increased cancer risk due to exposure to Project construction-source and operational-source DPM emissions is Location R2. At this location, the

1 MDAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at 2.22 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

TABLE ES-1: SUMMARY OF CONSTRUCTION CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
0.96 Year Exposure	Maximum Exposed Sensitive Receptor	2.13	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

TABLE ES-2: SUMMARY OF OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	0.20	10	NO
25 Year Exposure	Maximum Exposed Worker Receptor	0.04	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO
Annual Average	Maximum Exposed Worker Receptor	≤0.01	1.0	NO

TABLE ES-3: SUMMARY OF CONSTRUCTION AND OPERATIONAL CANCER AND NON-CANCER RISKS

Time Period	Location	Maximum Lifetime Cancer Risk (Risk per Million)	Significance Threshold (Risk per Million)	Exceeds Significance Threshold
30 Year Exposure	Maximum Exposed Sensitive Receptor	2.22	10	NO
Time Period	**Location**	**Maximum Hazard Index**	**Significance Threshold**	**Exceeds Significance Threshold**
Annual Average	Maximum Exposed Sensitive Receptor	≤0.01	1.0	NO

1 INTRODUCTION

The purpose of this Health Risk Assessment (HRA) is to evaluate Project-related impacts to nearby sensitive receptors (residents) and workers as a result of heavy-duty diesel trucks accessing the site.

The MDAQMD identifies that if a proposed Project is expected to generate/attract heavy-duty diesel trucks, which emit DPM, preparation of a mobile source HRA is recommended. This document serves to meet the MDAQMD's recommendation for preparation of an HRA. The mobile source HRA has been prepared in accordance with all relevant and appropriate procedures presented by the United States Environmental Protection Agency (U.S. EPA), California EPA and MDAQMD. Cancer risk is expressed in terms of expected incremental incidence per million population. The MDAQMD has established an incidence rate of ten (10) persons per million as the maximum acceptable incremental cancer risk due to DPM exposure from a project such as the proposed Project. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulatively considerable impact.

The MDAQMD has also established non-carcinogenic risk parameters for use in HRAs. Non-carcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. In this HRA, non-carcinogenic exposures of less than 1.0 are considered less-than-significant. Both the cancer risk and non-carcinogenic risk thresholds are applied to the nearest sensitive receptors below.

1.1 SITE LOCATION

The proposed Project is located on the northwest corner of Amargosa Road, and Palmetto Way in the City of Hesperia as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,850[2] square high-cube fulfillment center warehouse building as shown on Exhibit 1-B. the proposed project is anticipated to be constructed and fully operational by year 2024.

2 The proposed building square footage utilized in this analysis is based on a previous site plan which assumed a slightly smaller building square footage. Nonetheless, the emissions analyzed in this report would not change and a less than significant impact is expected.

EXHIBIT 1-A: LOCATION MAP

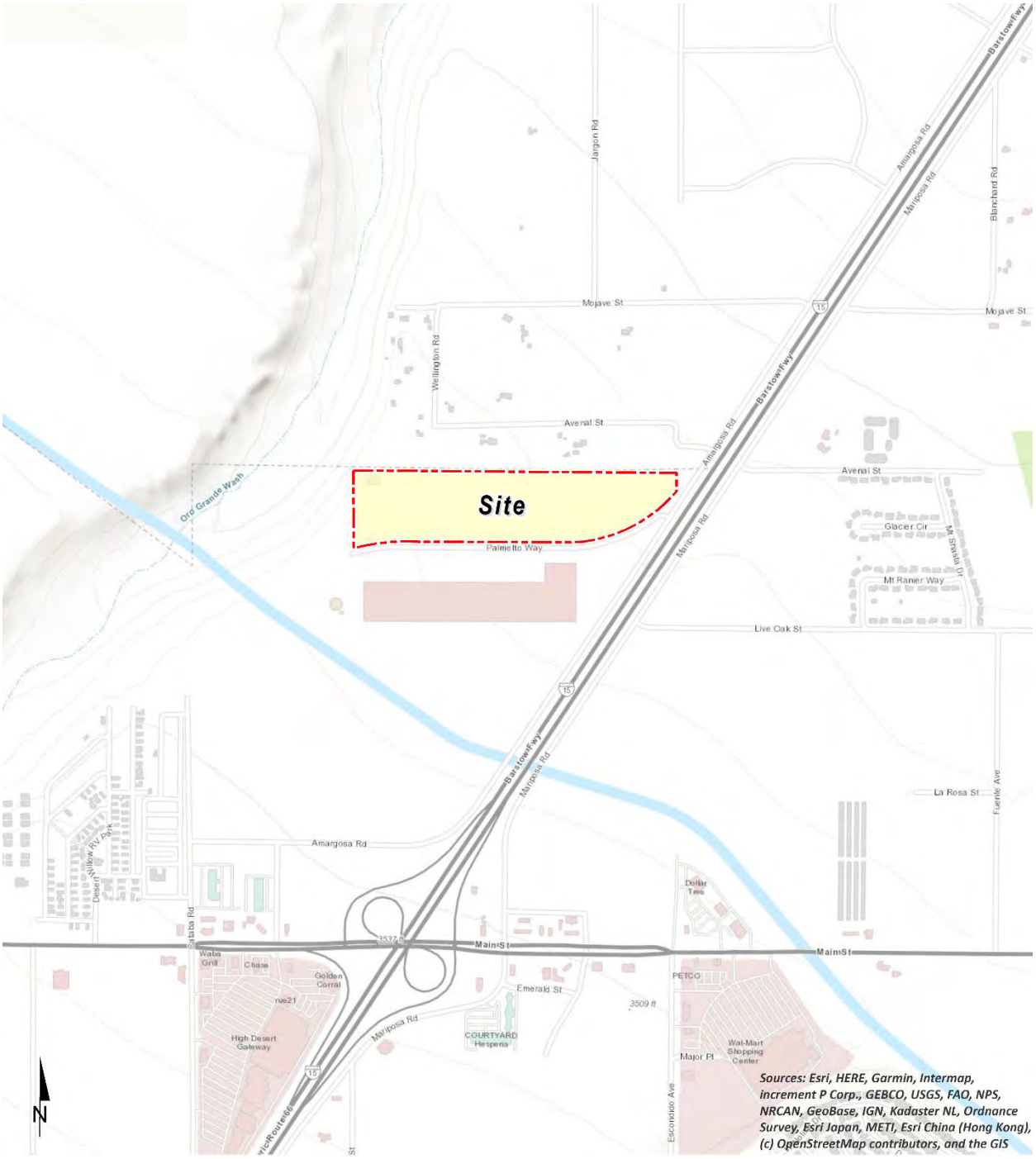
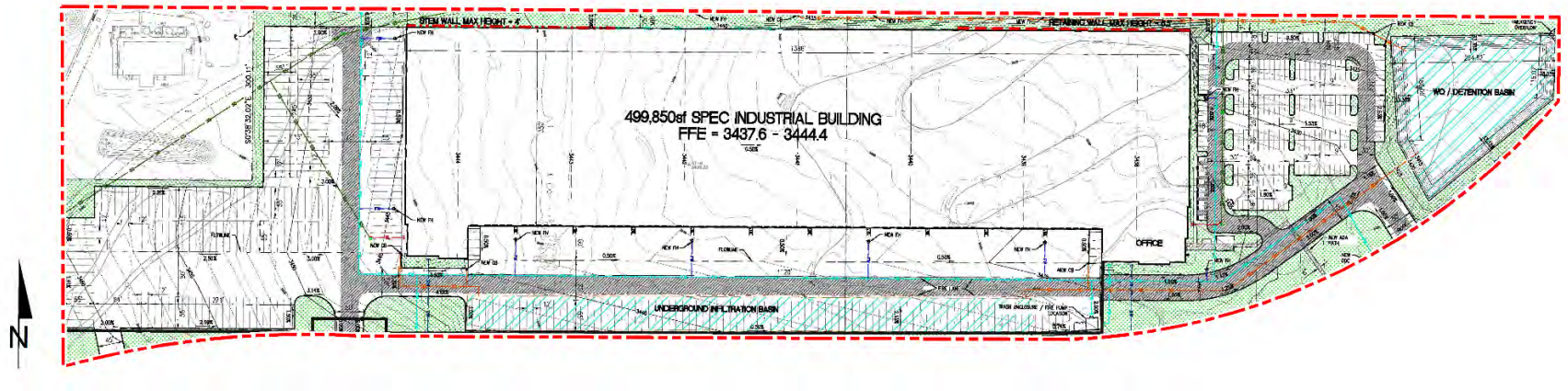


EXHIBIT 1-B: SITE PLAN



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2 BACKGROUND

2.1 BACKGROUND ON RECOMMENDED METHODOLOGY

This HRA is based on applicable guidelines to produce conservative estimates of human health risk posed by exposure to DPM. The conservative nature of this analysis is due primarily to the following factors:

- The ARB-adopted diesel exhaust Unit Risk Factor (URF) of 300 in one million per $\mu g/m^3$ is based upon the upper 95 percentile of estimated risk for each of the epidemiological studies utilized to develop the URF. Using the 95th percentile URF represents a very conservative (health-protective) risk posed by DPM because it represents breathing rates that are high for the human body (95% higher than the average population).
- The emissions derived assume that every truck accessing the Project site will idle for 15 minutes under the unmitigated scenario, and this is an overestimation of actual idling times and thus conservative.[3] The California Air Resources Board (CARB's) anti-idling requirements impose a 5-minute maximum idling time and therefore the analysis conservatively overestimates DPM emissions from idling by a factor of 3.

2.2 CONSTRUCTION HEALTH RISK ASSESSMENT

2.2.1 EMISSIONS CALCULATIONS

The emissions calculations for the construction HRA component are based on an assumed mix of construction equipment and hauling activity as presented in the *Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis* ("technical study") prepared by Urban Crossroads, Inc. (2).

Construction related DPM emissions are expected to occur primarily as a function of heavy-duty construction equipment that would be operating on-site.

As discussed in the technical study, the Project would result in approximately 250 total working-days of construction activity. The construction duration by phase is shown on Table 2-1. A detailed summary of construction equipment assumptions by phase is provided at Table 2-2. The CalEEMod emissions outputs are presented in Appendix 2.1. The modeled emission sources for construction activity are illustrated on Exhibit 2-A.

[3] Although the Project is required to comply with ARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions should be estimated for 15 minutes of truck idling (personal communication, in person, with Jillian Wong, December 22, 2016), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

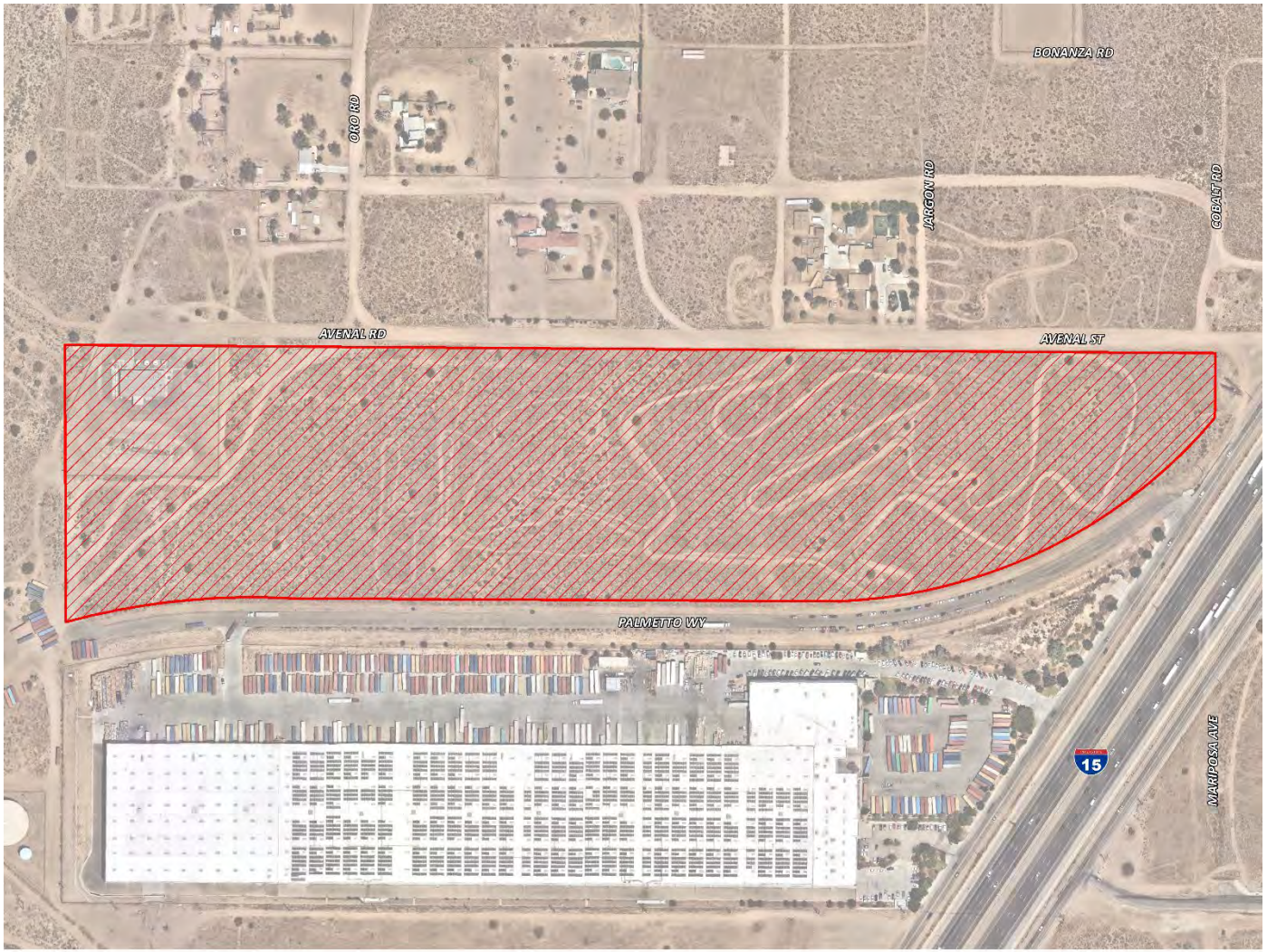
TABLE 2-1: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	1/15/2023	2/1/2023	13
Grading	2/1/2023	3/31/2023	43
Building Construction	3/15/2023	11/30/2023	187
Paving	11/15/2023	12/30/2023	33
Architectural Coating	11/6/2023	12/30/2023	40

TABLE 2-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Number	Hours Per Day
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

EXHIBIT 2-A: MODELED CONSTRUCTION EMISSION SOURCES



2.3 OPERATIONAL HEALTH RISK ASSESSMENT

2.3.1 ON-SITE AND OFF-SITE TRUCK ACTIVITY

Vehicle DPM emissions were calculated using emission factors for particulate matter less than 10µm in diameter (PM_{10}) generated with the 2021 version of the EMission FACtor model (EMFAC) developed by the CARB. EMFAC 2021 is a mathematical model that CARB developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the ARB to project changes in future emissions from on-road mobile sources (3). The most recent version of this model, EMFAC 2021, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

Several distinct emission processes are included in EMFAC 2021. Emission factors calculated using EMFAC 2021 are expressed in units of grams per vehicle miles traveled (g/VMT) or grams per idle-hour (g/idle-hr), depending on the emission process. The emission processes and corresponding emission factor units associated with diesel particulate exhaust for this Project are presented below.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC 2021 in EMFAC Mode for vehicles in the San Bernardino County jurisdiction. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of temperature, relative humidity, and vehicle speed. The model was run for speeds traveled in the vicinity of the Project. The vehicle travel speeds for each segment modeled are summarized below.

- Idling – on-site loading/unloading and truck gate
- 5 miles per hour – on-site vehicle movement including driving and maneuvering
- 25 miles per hour – off-site vehicle movement including driving and maneuvering.

Calculated emission factors are shown at Table 2-3. As a conservative measure, a 2024 EMFAC 2021 run was conducted and a static 2024 emissions factor data set was used for the entire duration of analysis herein (e.g., 30 years). Use of 2024 emission factors would overstate potential impacts since this approach assumes that emission factors remain “static” and do not change over time due to fleet turnover or cleaner technology with lower emissions that would be incorporated into vehicles after 2024. Additionally, based on EMFAC 2021, Light-Heavy-Duty Trucks are comprised of 59.6% diesel, Medium-Heavy-Duty Trucks are comprised of 75.1% diesel, and Heavy-Heavy-Duty Trucks are comprised of 99.7% diesel. Trucks fueled by diesel are accounted for by these percentages accordingly in the emissions factor generation. Appendix 2.2 includes additional details on the emissions estimates from EMFAC.

The vehicle DPM exhaust emissions were calculated for running exhaust emissions. The running exhaust emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC over the total distance traveled. The following equation was used to estimate off-site emissions for each of the different vehicle classes comprising the mobile sources (4):

$Emissions_{speedA}$ (g/s) = $EF_{RunExhaust}$ (g/VMT) * Distance (VMT/trip) * Number of Trips (trips/day) / seconds per day

Where:

$Emissions_{speedA}$ (g/s): Vehicle emissions at a given speed A;

$EF_{RunExhaust}$ (g/VMT): EMFAC running exhaust PM_{10} emission factor at speed A;

Distance (VMT/trip): Total distance traveled per trip.

Similar to off-site traffic, on-site vehicle running emissions were calculated by applying the running exhaust PM_{10} emission factor (g/VMT) from EMFAC and the total vehicle trip number over the length of the driving path using the same formula presented above for on-site emissions. In addition, on-site vehicle idling exhaust emissions were calculated by applying the idle exhaust PM_{10} emission factor (g/idle-hr) from EMFAC and the total truck trip over the total assumed idle time (15 minutes). The following equation was used to estimate the on-site vehicle idling emissions for each of the different vehicle classes (4):

$Emissions_{idle}$ (g/s) = EF_{idle} (g/hr) * Number of Trips (trips/day) * Idling Time (min/trip) *

60 minutes per hour / seconds per day

Where:

$Emissions_{idle}$ (g/s): Vehicle emissions during idling;

EF_{idle}(g/s): EMFAC idle exhaust PM_{10} emission factor.

TABLE 2-3: 2024 WEIGHTED AVERAGE DPM EMISSIONS FACTORS

Speed	Weighted Average
0 (idling)	0.08786 (g/idle-hr)
5	0.02217 (g/s)
25	0.00958 (g/s)

Each roadway was modeled as a line source (made up of multiple adjacent volume sources). Due to the large number of volume sources modeled for this analysis, the corresponding coordinates of each volume source have not been included in this report but are included in Appendix 2.3. The DPM emission rate for each volume source was calculated by multiplying the emission factor (based on the average travel speed along the roadway) by the number of trips and the distance traveled along each roadway segment and dividing the result by the number of volume sources along that roadway, as illustrated on Table 2-4. The modeled emission sources are illustrated on Exhibit 2-B for on-site sources and Exhibit 2-C for off-site sources. The modeling domain is limited to the Project's primary truck route and includes off-site sources in the study area for more than ¾ mile. This modeling domain is more inclusive and conservative than using only a ¼ mile modeling domain which is the distance supported by several reputable studies which conclude that the greatest potential risks occur within a ¼ mile of the primary source of emissions (1) (in the case of the Project, the primary source of emissions is the on-site idling and on-site travel).

EXHIBIT 2-B: MODELED ON-SITE EMISSION SOURCES

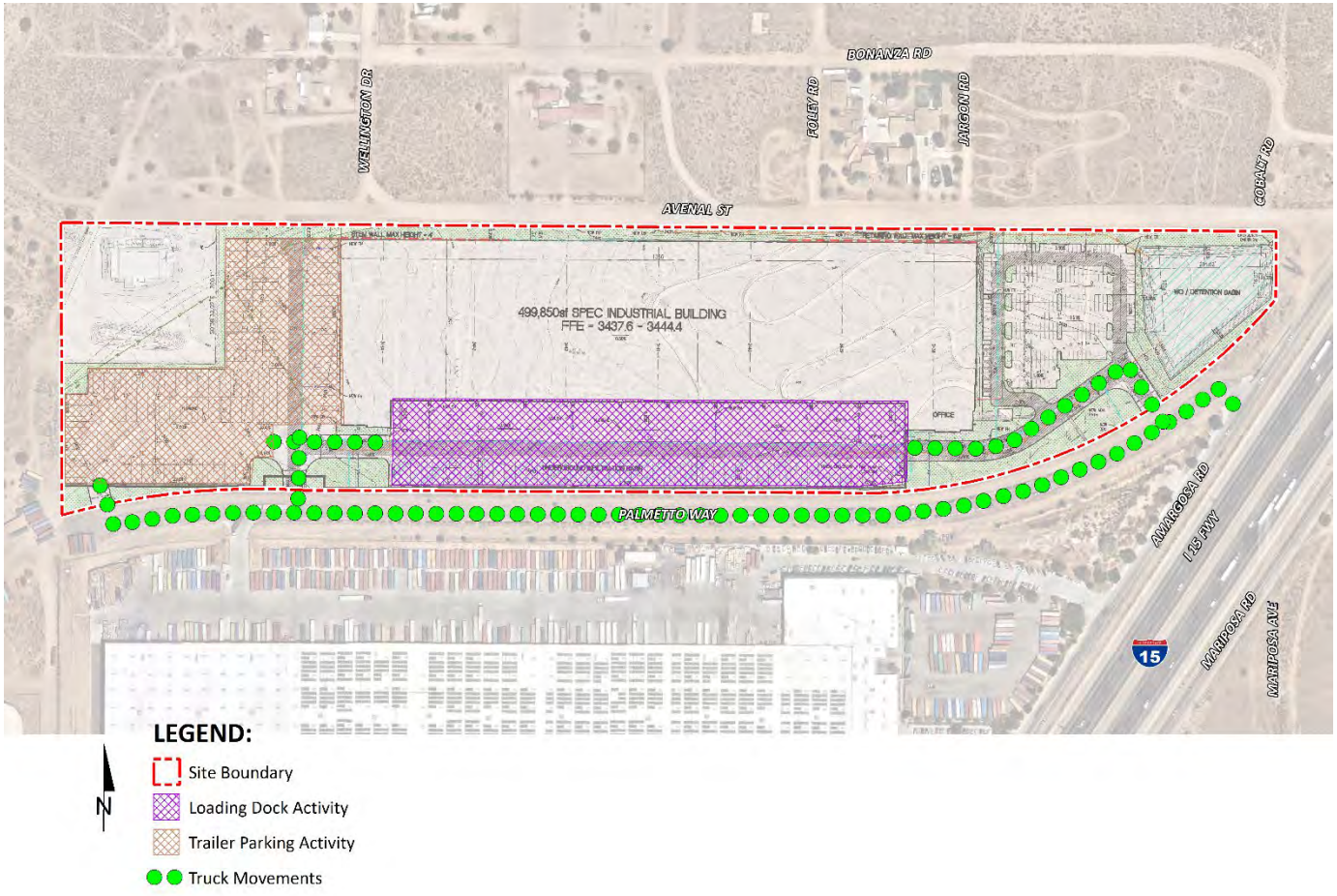


EXHIBIT 2-C: MODELED OFF-SITE EMISSION SOURCES

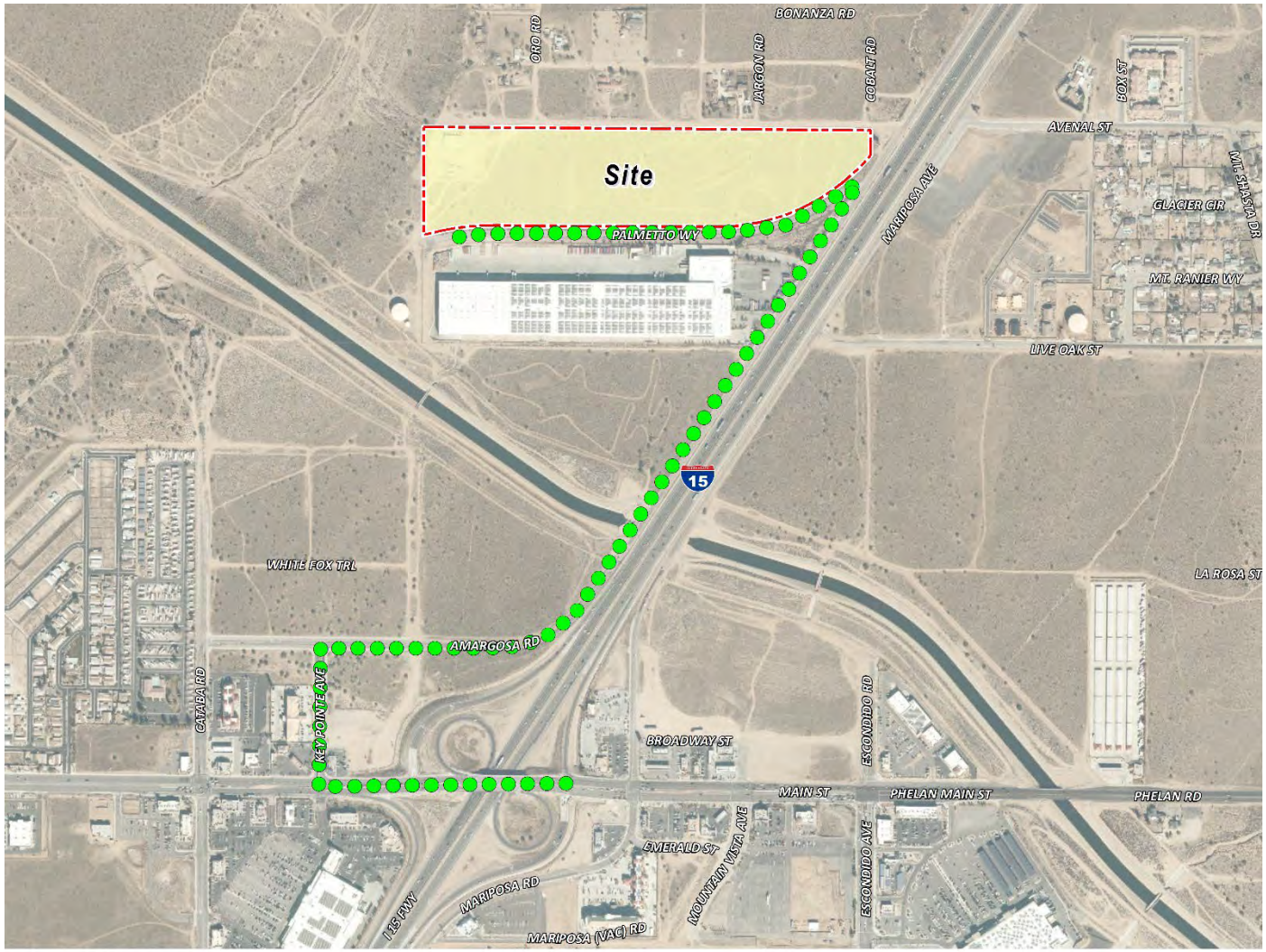


TABLE 2-4: DPM EMISSIONS FROM PROJECT TRUCKS (2024 ANALYSIS YEAR)

Truck Emission Rates						
Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling	58			0.0879	1.26	1.462E-05
On-Site Travel 5%	6	0.84	0.0222		0.02	2.168E-07
On-Site Travel 20%	23	1.34	0.0222		0.03	3.439E-07
On-Site Travel 75%	86	10.35	0.0222		0.23	2.655E-06
On-Site Travel 100%	115	24.82	0.0222		0.55	6.369E-06
Off-Site Travel - Palmeto Way 5% Inbound/Outbound	6	0.45	0.0096		0.00	5.032E-08
Off-Site Travel - Palmeto Way 25% Inbound/Outbound	29	10.63	0.0096		0.10	1.179E-06
Off-Site Travel - Amargosa Road 100% Inbound/Outbound	115	89.98	0.0096		0.86	9.979E-06
Off-Site Travel - Main Street 100% Inbound/Outbound	115	66.31	0.0096		0.64	7.354E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2021. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

On-site truck idling was estimated to occur as trucks enter and travel through the Project site. Although the Project's diesel-fueled truck and equipment operators will be required by State law to comply with CARB's idling limit of 5 minutes, staff at SCAQMD recommends that the on-site idling emissions be calculated assuming 15 minutes of truck idling (5), which would take into account on-site idling which occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc. As such, this analysis calculates truck idling at 15 minutes, consistent with SCAQMD's recommendation. Even though the Project is not within the jurisdiction of the SCAQMD, these recommendations are relevant for CEQA purposes since MDAQMD does not provide similar guidance.

The Project is expected to generate a total of approximately 905 vehicular trip-ends (actual vehicles) per day (453 vehicles inbound + 453 vehicles outbound) which includes 790 two-way passenger car trip-ends (395 passenger cars inbound + 395 passenger cars outbound) and 115 two-way truck trip-ends per day (58 trucks inbound + 58 trucks outbound) (6).

2.4 EXPOSURE QUANTIFICATION

The Environmental Protection Agency's (U.S. EPA's) AERMOD model has been utilized for this analysis. For purposes of this analysis, the Lakes AERMOD View (Version 11.0.0) was used to calculate annual average particulate concentrations associated with site operations. Lakes AERMOD View was utilized to incorporate the U.S. EPA's latest AERMOD Version 22112 (7).

The model offers additional flexibility by allowing the user to assign an initial release height and vertical dispersion parameters for mobile sources representative of a roadway. For this HRA, the roadways were modeled as adjacent volume sources. Roadways were modeled using the U.S. EPA's haul route methodology for modeling of on-site and off-site truck movement. More specifically, the Haul Road Volume Source Calculator in Lakes AERMOD View has been utilized to determine the release height parameters. Based on the US EPA methodology, the Project's modeled sources would result in a release height of 3.49 meters, and an initial lateral dimension of 4.0 meters, and an initial vertical dimension of 3.25 meters.

Model parameters are presented in Table 2-5 (8). The model requires additional input parameters including emission data and local meteorology. Meteorological data from the Daggett Airport monitoring station located in MDAQMD was used to represent local weather conditions and prevailing winds (9).

TABLE 2-5: AERMOD MODEL PARAMETERS

Dispersion Coefficient (Urban/Rural)	Rural
Terrain (Flat/Elevated)	Elevated (Regulatory Default)
Averaging Time	1 year (5-year Meteorological Data Set)
Receptor Height	0 meters (Regulatory Default)

Universal Transverse Mercator (UTM) coordinates for World Geodetic System (WGS) 84 were used to locate the Project site boundaries, each volume source location, and receptor locations in the Project site's vicinity. The AERMOD dispersion model summary output files for the

proposed Project are presented in Appendix 2.3. Modeled sensitive receptors were placed at residential and non-residential locations.

Receptors may be placed at applicable structure locations for residential and worker property and not necessarily the boundaries of the properties containing these uses because the human receptors (residents and workers) spend a majority of their time at the residence or in the workplace's building, and not on the property line. It should be noted that the primary purpose of receptor placement is focused on long-term exposure. For example, the HRA evaluates the potential health risks to residents and workers over a period of 30 or 25 years of exposure, respectively. Notwithstanding, as a conservative measure, receptors were placed at either the outdoor living area or the building façade, whichever is closer to the Project site.

For purposes of this HRA, receptors include both residential and non-residential (worker) land uses in the vicinity of the Project. These receptors are included in the HRA since residents and workers may be exposed at these locations over a long-term duration of 30 and 25 years, respectively. This methodology is consistent with MDAQMD and OEHHA recommended guidance.

Any impacts to residents or workers located further away from the Project site than the modeled residential and workers would have a lesser impact than what has already been disclosed in the HRA at the MEIR and MEIW because concentrations dissipate with distance.

All receptors were set to existing elevation height so that only ground-level concentrations are analyzed. United States Geological Survey (USGS) Digital Elevation Model (DEM) terrain data based on a 7.5-minute topographic quadrangle map series using AERMAP was utilized in the HRA modeling to set elevations (10).

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were obtained from relevant distribution profiles presented in the 2015 OEHHA Guidelines. Tables 2-6 through 2-8 summarize the Exposure Parameters for Residents and Workers based on 2015 OEHHA Guidelines. Appendix 2.4 includes the detailed risk calculation.

TABLE 2-6: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (CONSTRUCTION ACTIVITY)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
0 to 2	1,090	10	0.96	1.0	260	8

TABLE 2-7: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (30 YEAR RESIDENTIAL)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
-0.25 to 0	361	10	0.25	0.85	350	24

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Fraction of Time at Home	Exposure Frequency (days/year)	Exposure Time (hours/day)
0 to 2	1,090	10	2	0.85	350	24
2 to 16	572	3	14	0.72	350	24
16 to 30	261	1	14	0.73	350	24

TABLE 2-8: EXPOSURE ASSUMPTIONS FOR INDIVIDUAL CANCER RISK (25 YEAR WORKER)

Age	Daily Breathing Rate (L/kg-day)	Age Specific Factor	Exposure Duration (years)	Exposure Frequency (days/year)	Exposure Time (hours/day)
16 to 41	230	1	25	250	12

2.5 CARCINOGENIC CHEMICAL RISK

Excess cancer risks are estimated as the upper-bound incremental probability that an individual will develop cancer over a lifetime as a direct result of exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a unitless probability. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time.

Guidance from CARB and the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) recommends a refinement to the standard point estimate approach when alternate human body weights and breathing rates are utilized to assess risk for susceptible subpopulations such as children. For the inhalation pathway, the procedure requires the incorporation of several discrete variates to effectively quantify dose. Once determined, contaminant dose is multiplied by the cancer potency factor (CPF) in units of inverse dose expressed in milligrams per kilogram per day $(mg/kg/day)^{-1}$ to derive the cancer risk estimate. Therefore, to assess exposures, the following dose algorithm was utilized.

$$DOSE_{air} = (C_{air} \times [BR/BW] \times A \times EF) \times (1 \times 10^{-6})$$

Where:

$DOSE_{air}$ = chronic daily intake (mg/kg/day)

Cair = concentration of contaminant in air (ug/m^3)

[BR/BW] = daily breathing rate normalized to body weight (L/kg BW-day)

A = inhalation absorption factor

EF = exposure frequency (days/365 days)

BW = body weight (kg)

1×10^{-6} = conversion factors (µg to mg, L to m^3)

$RISK_{air} = DOSE_{air} \times CPF \times ED/AT$

Where:

$DOSE_{air}$ = chronic daily intake (mg/kg/day)

CPF = cancer potency factor

ED = number of years within particular age group

AT = averaging time

2.6 NON-CARCINOGENIC EXPOSURES

An evaluation of the potential noncarcinogenic effects of chronic exposures was also conducted. Adverse health effects are evaluated by comparing a compound's annual concentration with its toxicity factor or Reference Exposure Level (REL). The REL for diesel particulates was obtained from OEHHA for this analysis. The chronic reference exposure level (REL) for DPM was established by OEHHA as 5 µg/m^3 (11).

The non-cancer hazard index was calculated as follows:

The relationship for the non-cancer health effects of DPM is given by the following equation:

$$HI_{DPM} = C_{DPM}/REL_{DPM}$$

Where:

HI_{DPM} = Hazard Index; an expression of the potential for non-cancer health effects.

C_{DPM} = Annual average DPM concentration (µg/m^3).

REL_{DPM} = Reference exposure level (REL) for DPM; the DPM concentration at which no adverse health effects are anticipated.

2.7 POTENTIAL PROJECT-RELATED DPM SOURCE CANCER AND NON-CANCER RISKS

CONSTRUCTION IMPACTS

The land use with the greatest potential exposure to Project construction-source DPM emissions is Location R2 which is located approximately 76 feet north the Project site at an existing residence located at 13164 Avenal Road. R2 is placed in the private outdoor living area (backyard) facing the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project construction-source DPM emissions is estimated at 2.13 in one million, which is less than the

MDAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction activity. All other receptors during construction activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

OPERATIONAL IMPACTS

Residential Exposure Scenario:

The residential land use with the greatest potential exposure to Project operational-source DPM emissions is Location R4 which is located approximately 1,071 feet southeast of the Project site at an existing residence located at 13500 Live Oak Street. Since there are no private outdoor living areas facing the Project site, R4 is placed at the building façade nearest the Project site. At the MEIR, the maximum incremental cancer risk attributable to Project operational-source DPM emissions is estimated at 0.20 in one million, which is less than the MDAQMD's significance threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled residential receptors are exposed to lesser concentrations and are located at a greater distance from the Project site than the MEIR analyzed herein, and TACs generally dissipates with distance from the source, all other residential receptors in the vicinity of the Project site would be exposed to less emissions and therefore less risk than the MEIR identified herein. As such, the Project will not cause a significant human health or cancer risk to nearby residences. The nearest modeled receptors are illustrated on Exhibit 2-D.

Worker Exposure Scenario[4]*:*

The worker receptor land use with the greatest potential exposure to Project operational-source DPM emissions is Location R6, which represents the potential worker receptor approximately 201 feet south of the Project site. At the MEIW, the maximum incremental cancer risk impact is 0.04 in one million which is less than the MDAQMD's threshold of 10 in one million. Maximum non-cancer risks at this same location were estimated to be <0.01, which would not exceed the applicable significance threshold of 1.0. Because all other modeled worker receptors are located at a greater distance than the MEIW analyzed herein, and DPM dissipates with distance from the source, all other worker receptors in the vicinity of the Project would be exposed to less emissions and therefore less risk than the MEIW identified herein. As such, the Project will not cause a significant human health or cancer risk to adjacent workers. The nearest modeled receptors are illustrated on Exhibit 2-D.

4 MDAQMD guidance does not require assessment of the potential health risk to on-site workers. Excerpts from the document OEHHA Air Toxics Hot Spots Program Risk Assessment Guidelines—The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA 2003), also indicate that it is not necessary to examine the health effects to on-site workers unless required by RCRA (Resource Conservation and Recovery Act) / CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) or the worker resides on-site.

School Child Exposure Scenario:

Proximity to sources of toxics is critical to determining the impact. In traffic-related studies, the additional non-cancer health risk attributable to proximity was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70-percent drop-off in particulate pollution levels at 500 feet. Based on California Air Resources Board (CARB) emissions and modeling analyses, an 80-percent drop-off in pollutant concentrations is expected at approximately 1,000 feet from a distribution center (1).

The 1,000-foot evaluation distance is supported by research-based findings concerning Toxic Air Contaminant (TAC) emission dispersion rates from roadways and large sources showing that emissions diminish substantially between 500 and 1,000 feet from emission sources.

A one-quarter mile radius, or 1,320 feet, is commonly utilized for identifying sensitive receptors, such as schools, that may be impacted by a proposed project. This radius is more robust than, and therefore provides a more health protective scenario for evaluation than the 1,000-foot impact radius identified above.

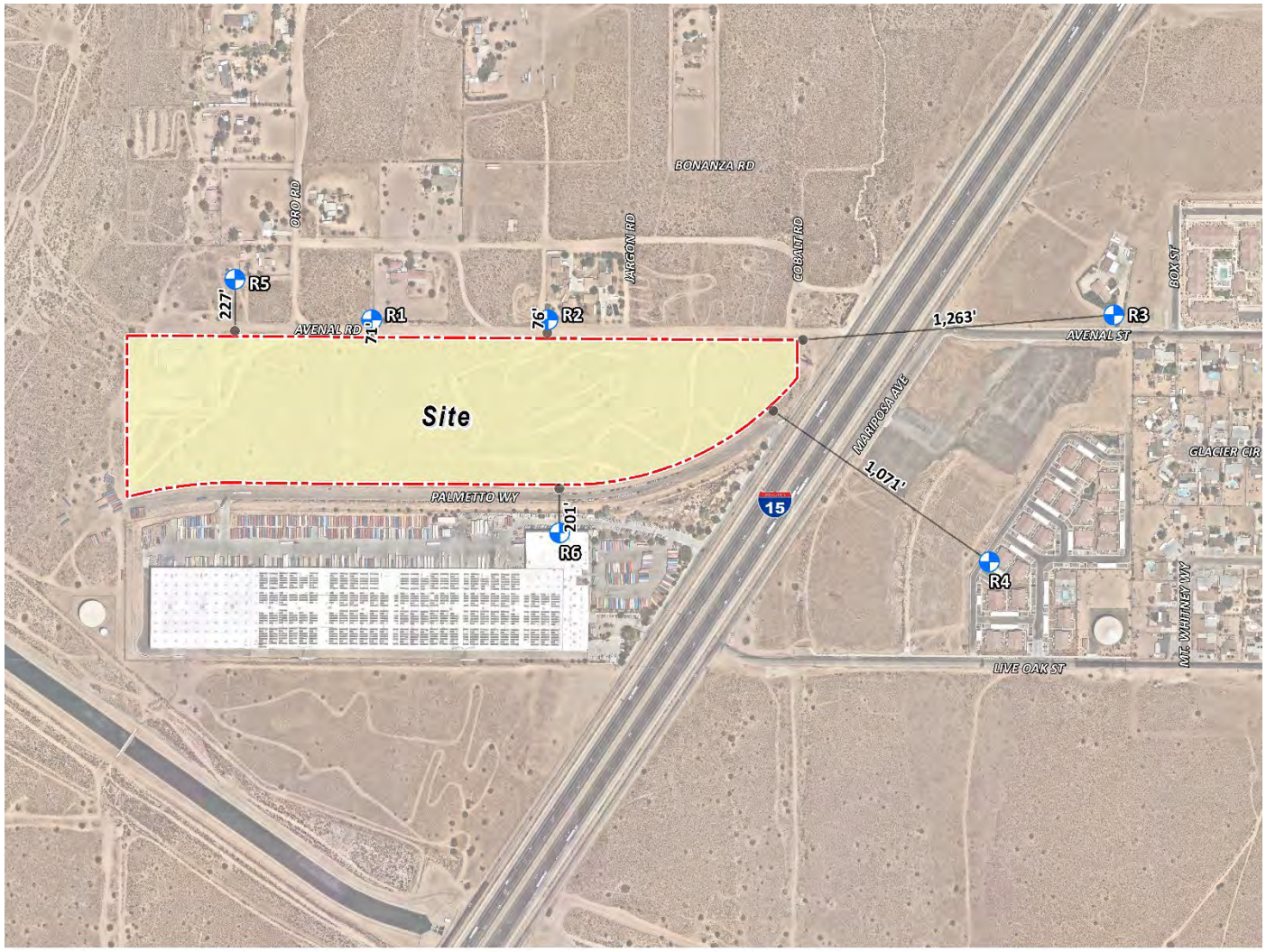
There are no schools within ¼ mile of the Project site. The nearest school is Topaz Preparatory Academy, which is located approximately 5,580 feet southeast of the Project site. Because there is no reasonable potential that TAC emissions would cause significant health impacts at distances of more than ¼ mile from the air pollution source, there would be no significant impacts that would occur to any schools in the vicinity of the Project.

CONSTRUCTION AND OPERATIONAL IMPACTS

The land use with the greatest potential increased cancer risk due to exposure to Project construction-source and operational-source DPM emissions is Location R2. At this location, the maximum incremental cancer risk attributable to Project construction and operational DPM source emissions is estimated at 2.22 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location. The nearest modeled receptors are illustrated on Exhibit 2-D.

It should be noted that the receptors presented in Exhibit 2-D do not represent all modeled receptors.

EXHIBIT 2-D: RECEPTOR LOCATIONS



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3 REFERENCES

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4 CERTIFICATIONS

The contents of this health risk assessment represent an accurate depiction of the impacts to sensitive receptors associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this health risk assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me at (949) 660-1994.

Haseeb Qureshi
Principal
URBAN CROSSROADS, INC.
(949) 660-1994
hqureshi@urbanxroads.com

EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June 2013
Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
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APPENDIX 2.1:

CALEEMOD OUTPUTS

14848-Palmetto Industrial (Construction) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Construction)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.83	4.90	47.0	38.0	0.05	2.53	—	2.53	2.33	—	2.33	—	5,530	5,530	0.22	0.04	—	5,549
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.67	1.35	< 0.005	0.09	—	0.09	0.08	—	0.08	—	197	197	0.01	< 0.005	—	198
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	32.6	32.6	< 0.005	< 0.005	—	32.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.12	1.15	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	235	235	0.01	0.01	0.03	238
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	132	132	< 0.005	0.02	0.01	137
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	8.63	8.63	< 0.005	< 0.005	0.02	8.75

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.70	4.70	< 0.005	< 0.005	0.01	4.90
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.82	3.85	0.01	0.23	—	0.23	0.21	—	0.21	—	791	791	0.03	0.01	—	794

Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.88	0.70	< 0.005	0.04	—	0.04	0.04	—	0.04	—	131	131	0.01	< 0.005	—	131
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.32	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	269	269	0.01	0.01	0.03	272
Vendor	0.02	0.02	0.56	0.26	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	495	495	< 0.005	0.07	0.03	515
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	62.7	62.7	< 0.005	0.01	< 0.005	65.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.17	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	32.6	32.6	< 0.005	< 0.005	0.06	33.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	58.3	58.3	< 0.005	0.01	0.07	60.7
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.38	7.38	< 0.005	< 0.005	0.01	7.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	5.40	5.40	< 0.005	< 0.005	0.01	5.48
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.65	9.65	< 0.005	< 0.005	0.01	10.1

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.5. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.56	7.32	0.01	0.31	—	0.31	0.28	—	0.28	—	1,347	1,347	0.05	0.01	—	1,352
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.20	1.34	< 0.005	0.06	—	0.06	0.05	—	0.05	—	223	223	0.01	< 0.005	—	224
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.46	1.27	1.30	20.6	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	3,193	3,193	0.13	0.10	13.5	3,240
Vendor	0.10	0.08	2.23	1.07	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,078	2,078	< 0.005	0.28	5.51	2,168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.23	1.12	1.39	13.8	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	2,823	2,823	0.14	0.10	0.35	2,858
Vendor	0.10	0.07	2.36	1.09	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,080	2,080	< 0.005	0.28	0.14	2,165
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.58	0.76	7.93	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,490	1,490	0.07	0.05	2.97	1,510
Vendor	0.05	0.04	1.21	0.55	0.01	0.01	0.06	0.07	0.01	0.02	0.04	—	1,065	1,065	< 0.005	0.15	1.22	1,110
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.45	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	247	247	0.01	0.01	0.49	250
Vendor	0.01	0.01	0.22	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	176	176	< 0.005	0.02	0.20	184
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.91	< 0.005	0.04	—	0.04	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	0.99	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.10	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	18.8	18.8	< 0.005	< 0.005	0.04	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.11	3.11	< 0.005	< 0.005	0.01	3.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.25	1.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.14	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	19.5	19.5	< 0.005	< 0.005	—	19.6
Architectural Coatings	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.23	3.23	< 0.005	< 0.005	—	3.24
Architectural Coatings	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	2.77	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.03	0.02	0.07	572
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.34	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	63.7	63.7	< 0.005	< 0.005	0.13	64.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/15/2023	2/1/2023	5.00	13.0	—
Grading	Grading	2/1/2023	3/31/2023	5.00	43.0	—
Building Construction	Building Construction	3/15/2023	11/30/2023	5.00	187	—
Paving	Paving	11/15/2023	12/30/2023	5.00	33.0	—
Architectural Coating	Architectural Coating	11/6/2023	12/30/2023	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	15.0	10.2	HHDT,MHDT

Grading	Hauling	0.88	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	210	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	63.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	42.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	786,896	262,299	49,795

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5	0.00	—
Grading	300	—	172	0.00	—
Paving	0.00	0.00	0.00	0.00	19.1

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	3.93	100%
Other Non-Asphalt Surfaces	15.1	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8
Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9

Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—

2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0

Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

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APPENDIX 2.2:

EMFAC EMISSIONS SUMMARY

Emissions	Phase	Lb/Day	# Days	Emissions	Avg/Lb Day	Avg/Hourly
On-Site	Site Preparation	2.53	13	32.89	2.53	0.31625
Exhaust PM-10	Grading	1.96	43	84.28	1.96	0.245
	Building Construction	0.60	187	112.2	0.6	0.075
	Paving	0.41	33	13.53	0.41	0.05125
	Architectural Coatings	0.05	40	2	0.05	0.00625
		5.55	250	244.9	0.9796	0.12245
Off-Site	Site Preparation	5.00E-03	13	0.065	0.005	0.000625
Exhaust PM-10	Grading	1.50E-02	43	0.645	0.015	0.001875
	Building Construction	3.00E-02	187	5.61	0.03	0.00375
	Paving	0.00E+00	33	0	0	0
	Architectural Coatings	0.00E+00	40	0	0	0
		5.00E-02	250	6.32	0.02528	0.00316

Phase	Start Date	End Date	No. Days
Site Preparation	1/15/2023	2/1/2023	13
Grading	2/1/2023	3/31/2023	43
Building Construction	3/15/2023	11/30/2023	187
Paving	11/15/2023	12/30/2023	33
Arch Coatings	11/6/2023	12/30/2023	40
		Total Days of Construction	**250**

AVERAGE EMISSION FACTOR
SAN BERNARDINO COUNTY 2024

Speed	LHD1	LHD2	MHD	HHD
0	0.368686	0.58149	0.061905	0.01056
5	0.053893	0.072455	0.025539	0.01164
25	0.024164	0.034126	0.006884	0.00608

Speed	**Weighted Average Emissions**
0	**0.08786**
5	**0.02217**
25	**0.00958**

Truck Emission Rates						
Source	Trucks Per Day	VMT [a] (miles/day)	Truck Emission Rate [b] (grams/mile)	Truck Emission Rate [b] (grams/idle-hour)	Daily Truck Emissions [c] (grams/day)	Modeled Emission Rates (g/second)
On-Site Idling	58			0.0879	1.26	1.462E-05
On-Site Travel 5%	6	0.84	0.0222		0.02	2.168E-07
On-Site Travel 20%	23	1.34	0.0222		0.03	3.439E-07
On-Site Travel 75%	86	10.35	0.0222		0.23	2.655E-06
On-Site Travel 100%	115	24.82	0.0222		0.55	6.369E-06
Off-Site Travel - Palmeto Way 5% Inbound/Outbound	6	0.45	0.0096		0.00	5.032E-08
Off-Site Travel - Palmeto Way 25% Inbound/Outbound	29	10.63	0.0096		0.10	1.179E-06
Off-Site Travel - Amargosa Road 100% Inbound/Outbound	115	89.98	0.0096		0.86	9.979E-06
Off-Site Travel - Main Street 100% Inbound/Outbound	115	66.31	0.0096		0.64	7.354E-06

[a] Vehicle miles traveled are for modeled truck route only.

[b] Emission rates determined using EMFAC 2021. Idle emission rates are expressed in grams per idle hour rather than grams per mile.

[c] This column includes the total truck travel and truck idle emissions. For idle emissions this column includes emissions based on the assumption that each truck idles for 15 minutes.

calendar_y	season_m	sub_area	vehicle_class	fuel	temperatu	relative_hu	process	speed_tim	pollutant	emission_rate
2024	Annual	San Berna	HHDT	Dsl	60	70	RUNEX	5	PM10	0.011671
2024	Annual	San Berna	HHDT	Dsl	60	70	RUNEX	25	PM10	0.006095
2024	Annual	San Berna	HHDT	Dsl			IDLEX		PM10	0.010587
2024	Annual	San Berna	LHDT1	Dsl	60	70	RUNEX	5	PM10	0.11751
2024	Annual	San Berna	LHDT1	Dsl	60	70	RUNEX	25	PM10	0.052688
2024	Annual	San Berna	LHDT1	Dsl			IDLEX		PM10	0.803903
2024	Annual	San Berna	LHDT2	Dsl	60	70	RUNEX	5	PM10	0.098901
2024	Annual	San Berna	LHDT2	Dsl	60	70	RUNEX	25	PM10	0.046582
2024	Annual	San Berna	LHDT2	Dsl			IDLEX		PM10	0.793735
2024	Annual	San Berna	MHDT	Dsl	60	70	RUNEX	5	PM10	0.033995
2024	Annual	San Berna	MHDT	Dsl	60	70	RUNEX	25	PM10	0.009163
2024	Annual	San Berna	MHDT	Dsl			IDLEX		PM10	0.0824

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (MD)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar `	Vehicle Ca	Model Yea	Speed	Fuel	Population
San Berna	2024	HHDT	Aggregate	Aggregate	Gasoline	2.67372
San Berna	2024	HHDT	Aggregate	Aggregate	Diesel	12942
San Berna	2024	HHDT	Aggregate	Aggregate	Natural Ga	34.4553
San Berna	2024	LHDT1	Aggregate	Aggregate	Gasoline	13065.1
San Berna	2024	LHDT1	Aggregate	Aggregate	Diesel	11067.9
San Berna	2024	LHDT2	Aggregate	Aggregate	Gasoline	1727.12
San Berna	2024	LHDT2	Aggregate	Aggregate	Diesel	4731.8
San Berna	2024	MHDT	Aggregate	Aggregate	Gasoline	898.666
San Berna	2024	MHDT	Aggregate	Aggregate	Diesel	2714.45
San Berna	2024	MHDT	Aggregate	Aggregate	Natural Ga	8.40173

HHDT% GAS/NG	0.00286
HHDT% DSL	0.99714
LHDT1% GAS	0.54138
LHDT1% DSL	0.45862
LHDT2% GAS	0.2674
LHDT2% DSL	0.7326
MHDT% GAS	0.24872
MHDT% DSL	0.75128

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APPENDIX 2.3:

AERMOD MODEL INPUT/OUTPUT

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.0.0
** Lakes Environmental Software Inc.
** Date: 9/19/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 Construction\14848
Construction.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14848 Construction.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Main 100%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 0.0003981533
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 9
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** 464736.807, 3809792.354, 1066.45, 3.49, 6.51
** 464737.119, 3809533.869, 1070.00, 3.49, 6.51
** 464839.826, 3809535.430, 1069.12, 3.49, 6.51
** 464953.147, 3809541.673, 1068.06, 3.49, 6.51
** 465010.276, 3809542.298, 1068.03, 3.49, 6.51
** 465066.781, 3809543.547, 1068.00, 3.49, 6.51
** 465144.201, 3809541.361, 1068.00, 3.49, 6.51
** 465196.224, 3809538.430, 1067.07, 3.49, 6.51
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   LOCATION L0001191     VOLUME   464925.904 3809792.635 1064.36
   LOCATION L0001192     VOLUME   464911.904 3809792.614 1064.59
   LOCATION L0001193     VOLUME   464897.904 3809792.593 1064.85
   LOCATION L0001194     VOLUME   464883.904 3809792.572 1065.00
   LOCATION L0001195     VOLUME   464869.904 3809792.551 1065.00
   LOCATION L0001196     VOLUME   464855.904 3809792.531 1065.06
   LOCATION L0001197     VOLUME   464841.904 3809792.510 1065.27
   LOCATION L0001198     VOLUME   464827.904 3809792.489 1065.49
   LOCATION L0001199     VOLUME   464813.904 3809792.468 1065.74
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   LOCATION L0001200     VOLUME   464799.904 3809792.447 1066.00
   LOCATION L0001201     VOLUME   464785.904 3809792.427 1066.00
   LOCATION L0001202     VOLUME   464771.904 3809792.406 1066.00
   LOCATION L0001203     VOLUME   464757.904 3809792.385 1066.18
   LOCATION L0001204     VOLUME   464743.904 3809792.364 1066.39
   LOCATION L0001205     VOLUME   464736.815 3809785.451 1066.72
   LOCATION L0001206     VOLUME   464736.832 3809771.451 1067.00
   LOCATION L0001207     VOLUME   464736.849 3809757.451 1067.00
   LOCATION L0001208     VOLUME   464736.866 3809743.451 1067.01
   LOCATION L0001209     VOLUME   464736.883 3809729.451 1067.06
   LOCATION L0001210     VOLUME   464736.900 3809715.451 1067.12
   LOCATION L0001211     VOLUME   464736.916 3809701.451 1067.54
   LOCATION L0001212     VOLUME   464736.933 3809687.451 1067.95
   LOCATION L0001213     VOLUME   464736.950 3809673.451 1068.00
   LOCATION L0001214     VOLUME   464736.967 3809659.451 1068.00
   LOCATION L0001215     VOLUME   464736.984 3809645.451 1068.35
   LOCATION L0001216     VOLUME   464737.001 3809631.451 1068.82
   LOCATION L0001217     VOLUME   464737.018 3809617.451 1069.03
   LOCATION L0001218     VOLUME   464737.035 3809603.451 1069.07
   LOCATION L0001219     VOLUME   464737.052 3809589.451 1069.29
   LOCATION L0001220     VOLUME   464737.069 3809575.451 1069.71
   LOCATION L0001221     VOLUME   464737.086 3809561.451 1070.00
   LOCATION L0001222     VOLUME   464737.102 3809547.451 1070.00
   LOCATION L0001223     VOLUME   464737.537 3809533.875 1070.01
   LOCATION L0001224     VOLUME   464751.535 3809534.088 1070.00
   LOCATION L0001225     VOLUME   464765.534 3809534.301 1070.00
   LOCATION L0001226     VOLUME   464779.532 3809534.514 1070.00
   LOCATION L0001227     VOLUME   464793.530 3809534.726 1070.00
   LOCATION L0001228     VOLUME   464807.529 3809534.939 1069.76
   LOCATION L0001229     VOLUME   464821.527 3809535.152 1069.30
   LOCATION L0001230     VOLUME   464835.526 3809535.364 1069.02
   LOCATION L0001231     VOLUME   464849.510 3809535.963 1069.00
   LOCATION L0001232     VOLUME   464863.489 3809536.734 1068.97
   LOCATION L0001233     VOLUME   464877.468 3809537.504 1068.95
   LOCATION L0001234     VOLUME   464891.447 3809538.274 1068.92
   LOCATION L0001235     VOLUME   464905.426 3809539.044 1068.90
   LOCATION L0001236     VOLUME   464919.404 3809539.814 1068.87
   LOCATION L0001237     VOLUME   464933.383 3809540.585 1068.47
   LOCATION L0001238     VOLUME   464947.362 3809541.355 1068.07
   LOCATION L0001239     VOLUME   464961.353 3809541.763 1068.00
   LOCATION L0001240     VOLUME   464975.352 3809541.916 1068.00
   LOCATION L0001241     VOLUME   464989.351 3809542.069 1068.00
   LOCATION L0001242     VOLUME   465003.350 3809542.222 1068.00
   LOCATION L0001243     VOLUME   465017.348 3809542.454 1068.00
   LOCATION L0001244     VOLUME   465031.345 3809542.763 1068.00
   LOCATION L0001245     VOLUME   465045.341 3809543.073 1067.96
   LOCATION L0001246     VOLUME   465059.338 3809543.382 1067.84
   LOCATION L0001247     VOLUME   465073.333 3809543.362 1067.75
   LOCATION L0001248     VOLUME   465087.328 3809542.967 1067.77
   LOCATION L0001249     VOLUME   465101.322 3809542.572 1067.78
   LOCATION L0001250     VOLUME   465115.317 3809542.177 1067.79
   LOCATION L0001251     VOLUME   465129.311 3809541.782 1067.81
   LOCATION L0001252     VOLUME   465143.306 3809541.387 1067.82
   LOCATION L0001253     VOLUME   465157.284 3809540.624 1067.84
   LOCATION L0001254     VOLUME   465171.262 3809539.836 1067.54
   LOCATION L0001255     VOLUME   465185.240 3809539.049 1067.14
** End of LINE VOLUME Source ID = SLINE6
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   LOCATION VOL2         VOLUME     465159.187  3810684.724     1051.710
   LOCATION VOL3         VOLUME     465253.570  3810684.400     1050.000
   LOCATION VOL4         VOLUME     465347.889  3810684.400     1048.530
   LOCATION VOL5         VOLUME     465441.869  3810684.739     1047.430
   LOCATION VOL6         VOLUME     465535.509  3810685.417     1046.000
   LOCATION VOL7         VOLUME     465629.489  3810685.417     1044.800
   LOCATION VOL8         VOLUME     465680.041  3810685.417     1044.460
   LOCATION VOL9         VOLUME     465610.828  3810631.812     1046.000
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   LOCATION VOL10        VOLUME     465516.509  3810591.438     1047.840
   LOCATION VOL11        VOLUME     465422.530  3810591.438     1048.860
   LOCATION VOL12        VOLUME     465328.890  3810591.099     1050.000
   LOCATION VOL13        VOLUME     465234.910  3810590.420     1051.430
   LOCATION VOL14        VOLUME     465140.591  3810591.438     1052.650
   LOCATION VOL15        VOLUME     465046.611  3810591.438     1054.000
   LOCATION VOL16        VOLUME     464963.149  3810591.438     1055.000
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.0003981533
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 26
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   LOCATION L0000860     VOLUME   464969.568 3809792.096 1064.00
   LOCATION L0000861     VOLUME   464978.157 3809791.976 1064.00
   LOCATION L0000862     VOLUME   464986.746 3809791.857 1064.00
   LOCATION L0000863     VOLUME   464995.335 3809791.738 1064.00
   LOCATION L0000864     VOLUME   465003.925 3809791.618 1064.00
   LOCATION L0000865     VOLUME   465012.514 3809791.499 1063.96
   LOCATION L0000866     VOLUME   465021.103 3809791.380 1063.81
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   LOCATION L0000868     VOLUME   465038.281 3809791.141 1063.52
   LOCATION L0000869     VOLUME   465046.871 3809791.022 1063.50
   LOCATION L0000870     VOLUME   465055.460 3809790.903 1063.50
   LOCATION L0000871     VOLUME   465064.048 3809790.939 1063.50
   LOCATION L0000872     VOLUME   465072.634 3809791.185 1063.49
   LOCATION L0000873     VOLUME   465081.221 3809791.430 1063.48
   LOCATION L0000874     VOLUME   465089.784 3809791.937 1063.47
   LOCATION L0000875     VOLUME   465098.276 3809793.230 1063.42
   LOCATION L0000876     VOLUME   465106.750 3809794.614 1063.29
   LOCATION L0000877     VOLUME   465115.114 3809796.572 1063.15
   LOCATION L0000878     VOLUME   465123.478 3809798.529 1063.05
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LOCATION L0000879 VOLUME 465131.439 3809801.741 1062.96
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LOCATION L0000881 VOLUME 465147.316 3809808.304 1062.39
LOCATION L0000882 VOLUME 465155.119 3809811.860 1062.13
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LOCATION L0000886 VOLUME 465183.386 3809831.104 1062.00
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LOCATION L0000889 VOLUME 465201.896 3809848.962 1061.57
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LOCATION L0000893 VOLUME 465223.721 3809875.495 1060.72
LOCATION L0000894 VOLUME 465228.759 3809882.453 1060.61
LOCATION L0000895 VOLUME 465233.797 3809889.410 1060.58
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LOCATION L0000897 VOLUME 465243.873 3809903.325 1060.60
LOCATION L0000898 VOLUME 465248.911 3809910.282 1060.50
LOCATION L0000899 VOLUME 465253.950 3809917.240 1060.25
LOCATION L0000900 VOLUME 465258.988 3809924.197 1060.04
LOCATION L0000901 VOLUME 465263.997 3809931.175 1059.92
LOCATION L0000902 VOLUME 465268.769 3809938.317 1059.74
LOCATION L0000903 VOLUME 465273.541 3809945.460 1059.49
LOCATION L0000904 VOLUME 465278.313 3809952.603 1059.16
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LOCATION L0000906 VOLUME 465287.856 3809966.888 1058.90
LOCATION L0000907 VOLUME 465292.628 3809974.030 1058.75
LOCATION L0000908 VOLUME 465297.400 3809981.173 1058.51
LOCATION L0000909 VOLUME 465302.172 3809988.316 1058.24
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LOCATION L0000912 VOLUME 465316.488 3810009.744 1058.00
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LOCATION L0000914 VOLUME 465326.009 3810024.044 1057.86
LOCATION L0000915 VOLUME 465330.701 3810031.239 1057.65
LOCATION L0000916 VOLUME 465335.392 3810038.435 1057.37
LOCATION L0000917 VOLUME 465340.084 3810045.630 1057.01
LOCATION L0000918 VOLUME 465344.776 3810052.826 1057.00
LOCATION L0000919 VOLUME 465349.468 3810060.021 1057.00
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LOCATION L0000936 VOLUME 465429.163 3810182.387 1054.45
LOCATION L0000937 VOLUME 465433.837 3810189.594 1054.18
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LOCATION L0000941 VOLUME 465452.534 3810218.422 1054.00
LOCATION L0000942 VOLUME 465457.208 3810225.629 1054.00
LOCATION L0000943 VOLUME 465461.883 3810232.836 1053.77
LOCATION L0000944 VOLUME 465466.557 3810240.043 1053.54

LOCATION L0000945 VOLUME 465471.231 3810247.249 1053.30
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LOCATION L0000948 VOLUME 465485.254 3810268.870 1053.00
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LOCATION L0000951 VOLUME 465499.277 3810290.491 1052.59
LOCATION L0000952 VOLUME 465503.951 3810297.698 1052.33
LOCATION L0000953 VOLUME 465508.625 3810304.905 1052.14
LOCATION L0000954 VOLUME 465513.300 3810312.111 1052.03
LOCATION L0000955 VOLUME 465517.974 3810319.318 1052.00
LOCATION L0000956 VOLUME 465522.594 3810326.560 1051.97
LOCATION L0000957 VOLUME 465527.201 3810333.810 1051.86
LOCATION L0000958 VOLUME 465531.809 3810341.060 1051.67
LOCATION L0000959 VOLUME 465536.417 3810348.309 1051.38
LOCATION L0000960 VOLUME 465541.024 3810355.559 1050.98
LOCATION L0000961 VOLUME 465545.632 3810362.809 1050.59
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LOCATION L0000963 VOLUME 465554.847 3810377.308 1049.99
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LOCATION L0000966 VOLUME 465568.670 3810399.057 1049.52
LOCATION L0000967 VOLUME 465573.278 3810406.306 1049.21
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LOCATION L0000971 VOLUME 465591.709 3810435.305 1048.02
LOCATION L0000972 VOLUME 465596.316 3810442.555 1048.10
LOCATION L0000973 VOLUME 465600.924 3810449.804 1048.13
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LOCATION L0000979 VOLUME 465629.579 3810492.642 1048.00
LOCATION L0000980 VOLUME 465634.375 3810499.769 1048.00
LOCATION L0000981 VOLUME 465639.171 3810506.895 1048.00
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LOCATION L0000983 VOLUME 465648.762 3810521.149 1047.75
LOCATION L0000984 VOLUME 465653.557 3810528.276 1047.50
LOCATION L0000985 VOLUME 465658.353 3810535.403 1047.26
LOCATION L0000986 VOLUME 465663.148 3810542.529 1047.10
LOCATION L0000987 VOLUME 465667.944 3810549.656 1047.01
LOCATION L0000988 VOLUME 465672.740 3810556.783 1046.98
LOCATION L0000989 VOLUME 465677.535 3810563.910 1046.74
LOCATION L0000990 VOLUME 465682.331 3810571.036 1046.51
LOCATION L0000991 VOLUME 465687.126 3810578.163 1046.27
LOCATION L0000992 VOLUME 465691.750 3810585.402 1046.03
LOCATION L0000993 VOLUME 465696.334 3810592.666 1046.00
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LOCATION L0000995 VOLUME 465705.503 3810607.195 1045.87
LOCATION L0000996 VOLUME 465710.087 3810614.460 1045.68
LOCATION L0000997 VOLUME 465711.073 3810620.563 1045.53
LOCATION L0000998 VOLUME 465703.108 3810623.780 1045.67
LOCATION L0000999 VOLUME 465695.143 3810626.996 1045.64
LOCATION L0001000 VOLUME 465687.524 3810624.720 1045.72
LOCATION L0001001 VOLUME 465680.025 3810620.529 1045.86
LOCATION L0001002 VOLUME 465672.686 3810616.066 1046.00
LOCATION L0001003 VOLUME 465665.351 3810611.595 1046.02
LOCATION L0001004 VOLUME 465658.016 3810607.124 1046.12
LOCATION L0001005 VOLUME 465650.681 3810602.653 1046.29
LOCATION L0001006 VOLUME 465643.347 3810598.183 1046.53
LOCATION L0001007 VOLUME 465636.012 3810593.712 1046.75
LOCATION L0001008 VOLUME 465628.677 3810589.241 1046.90
LOCATION L0001009 VOLUME 465621.342 3810584.770 1047.03
LOCATION L0001010 VOLUME 465614.007 3810580.300 1047.17

LOCATION L0001011 VOLUME 465606.672 3810575.829 1047.35
LOCATION L0001012 VOLUME 465599.337 3810571.358 1047.49
LOCATION L0001013 VOLUME 465591.334 3810568.334 1047.60
LOCATION L0001014 VOLUME 465583.176 3810565.643 1047.68
LOCATION L0001015 VOLUME 465575.018 3810562.952 1047.81
LOCATION L0001016 VOLUME 465566.861 3810560.262 1047.92
LOCATION L0001017 VOLUME 465558.703 3810557.571 1047.99
LOCATION L0001018 VOLUME 465550.545 3810554.880 1048.04
LOCATION L0001019 VOLUME 465542.388 3810552.189 1048.13
LOCATION L0001020 VOLUME 465534.230 3810549.498 1048.22
LOCATION L0001021 VOLUME 465526.072 3810546.808 1048.31
LOCATION L0001022 VOLUME 465517.648 3810545.375 1048.36
LOCATION L0001023 VOLUME 465509.100 3810544.520 1048.39
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LOCATION L0001025 VOLUME 465492.018 3810542.691 1048.45
LOCATION L0001026 VOLUME 465483.485 3810541.710 1048.48
LOCATION L0001027 VOLUME 465474.951 3810540.729 1048.52
LOCATION L0001028 VOLUME 465466.417 3810539.748 1049.00
LOCATION L0001029 VOLUME 465457.828 3810539.683 1049.04
LOCATION L0001030 VOLUME 465449.239 3810539.641 1049.19
LOCATION L0001031 VOLUME 465440.649 3810539.600 1049.35
LOCATION L0001032 VOLUME 465432.059 3810539.558 1049.51
LOCATION L0001033 VOLUME 465423.469 3810539.517 1049.65
LOCATION L0001034 VOLUME 465414.879 3810539.475 1049.78
LOCATION L0001035 VOLUME 465406.289 3810539.434 1049.91
LOCATION L0001036 VOLUME 465397.699 3810539.392 1050.04
LOCATION L0001037 VOLUME 465389.109 3810539.351 1050.20
LOCATION L0001038 VOLUME 465380.519 3810539.310 1050.36
LOCATION L0001039 VOLUME 465371.929 3810539.268 1050.52
LOCATION L0001040 VOLUME 465363.340 3810539.227 1050.56
LOCATION L0001041 VOLUME 465354.750 3810539.185 1050.56
LOCATION L0001042 VOLUME 465346.160 3810539.144 1050.56
LOCATION L0001043 VOLUME 465337.570 3810539.102 1050.60
LOCATION L0001044 VOLUME 465328.980 3810539.061 1050.72
LOCATION L0001045 VOLUME 465320.390 3810539.019 1050.85
LOCATION L0001046 VOLUME 465311.800 3810538.978 1050.97
LOCATION L0001047 VOLUME 465303.210 3810538.936 1051.13
LOCATION L0001048 VOLUME 465294.620 3810538.895 1051.29
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LOCATION L0001050 VOLUME 465277.441 3810538.812 1051.61
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LOCATION L0001053 VOLUME 465251.671 3810538.688 1051.98
LOCATION L0001054 VOLUME 465243.081 3810538.646 1052.00
LOCATION L0001055 VOLUME 465234.491 3810538.605 1052.00
LOCATION L0001056 VOLUME 465225.901 3810538.563 1052.00
LOCATION L0001057 VOLUME 465217.311 3810538.522 1052.00
LOCATION L0001058 VOLUME 465208.721 3810538.481 1052.00
LOCATION L0001059 VOLUME 465200.131 3810538.439 1052.00
LOCATION L0001060 VOLUME 465191.542 3810538.398 1052.00
LOCATION L0001061 VOLUME 465182.952 3810538.356 1052.23
LOCATION L0001062 VOLUME 465174.362 3810538.315 1052.52
LOCATION L0001063 VOLUME 465165.772 3810538.273 1052.81
LOCATION L0001064 VOLUME 465157.182 3810538.232 1053.00
LOCATION L0001065 VOLUME 465148.592 3810538.190 1053.00
LOCATION L0001066 VOLUME 465140.002 3810538.164 1053.00
LOCATION L0001067 VOLUME 465131.412 3810538.164 1053.00
LOCATION L0001068 VOLUME 465122.822 3810538.164 1053.24
LOCATION L0001069 VOLUME 465114.232 3810538.164 1053.53
LOCATION L0001070 VOLUME 465105.642 3810538.164 1053.81
LOCATION L0001071 VOLUME 465097.052 3810538.164 1054.00
LOCATION L0001072 VOLUME 465088.462 3810538.164 1054.00
LOCATION L0001073 VOLUME 465079.872 3810538.164 1054.00
LOCATION L0001074 VOLUME 465071.282 3810538.164 1054.00
LOCATION L0001075 VOLUME 465062.692 3810538.164 1054.00
LOCATION L0001076 VOLUME 465054.102 3810538.164 1054.00

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   LOCATION L0001077     VOLUME   465045.512 3810538.164 1054.00
   LOCATION L0001078     VOLUME   465036.922 3810538.164 1054.10
   LOCATION L0001079     VOLUME   465028.343 3810537.768 1054.39
   LOCATION L0001080     VOLUME   465019.767 3810537.289 1054.67
   LOCATION L0001081     VOLUME   465011.190 3810536.809 1054.96
   LOCATION L0001082     VOLUME   465002.613 3810536.330 1055.16
   LOCATION L0001083     VOLUME   464994.037 3810535.850 1055.36
   LOCATION L0001084     VOLUME   464985.460 3810535.371 1055.56
   LOCATION L0001085     VOLUME   464976.884 3810534.891 1055.73
   LOCATION L0001086     VOLUME   464968.382 3810533.814 1055.84
   LOCATION L0001087     VOLUME   464959.954 3810532.156 1055.93
   LOCATION L0001088     VOLUME   464951.525 3810530.498 1055.99
** End of LINE VOLUME Source ID = SLINE7
** Source Parameters **
** LINE VOLUME Source ID = SLINE6
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   SRCPARAM L0001191     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001240     0.000006033      3.49      6.51      3.25
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   SRCPARAM VOL4         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL5         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL6         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL7         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL8         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL9         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL10        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL11        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL12        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL13        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL14        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL15        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL16        0.0009642775     5.000    21.842     1.400
** LINE VOLUME Source ID = SLINE7
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SRCPARAM L0000969     0.000001724      3.49      4.00      3.25
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SRCPARAM L0000971     0.000001724      3.49      4.00      3.25
SRCPARAM L0000972     0.000001724      3.49      4.00      3.25
SRCPARAM L0000973     0.000001724      3.49      4.00      3.25
SRCPARAM L0000974     0.000001724      3.49      4.00      3.25
SRCPARAM L0000975     0.000001724      3.49      4.00      3.25
SRCPARAM L0000976     0.000001724      3.49      4.00      3.25
SRCPARAM L0000977     0.000001724      3.49      4.00      3.25
SRCPARAM L0000978     0.000001724      3.49      4.00      3.25
SRCPARAM L0000979     0.000001724      3.49      4.00      3.25
SRCPARAM L0000980     0.000001724      3.49      4.00      3.25
SRCPARAM L0000981     0.000001724      3.49      4.00      3.25
SRCPARAM L0000982     0.000001724      3.49      4.00      3.25
SRCPARAM L0000983     0.000001724      3.49      4.00      3.25
SRCPARAM L0000984     0.000001724      3.49      4.00      3.25
SRCPARAM L0000985     0.000001724      3.49      4.00      3.25
SRCPARAM L0000986     0.000001724      3.49      4.00      3.25
SRCPARAM L0000987     0.000001724      3.49      4.00      3.25
SRCPARAM L0000988     0.000001724      3.49      4.00      3.25
SRCPARAM L0000989     0.000001724      3.49      4.00      3.25
SRCPARAM L0000990     0.000001724      3.49      4.00      3.25
SRCPARAM L0000991     0.000001724      3.49      4.00      3.25
SRCPARAM L0000992     0.000001724      3.49      4.00      3.25
SRCPARAM L0000993     0.000001724      3.49      4.00      3.25
SRCPARAM L0000994     0.000001724      3.49      4.00      3.25
SRCPARAM L0000995     0.000001724      3.49      4.00      3.25
SRCPARAM L0000996     0.000001724      3.49      4.00      3.25
SRCPARAM L0000997     0.000001724      3.49      4.00      3.25
SRCPARAM L0000998     0.000001724      3.49      4.00      3.25
SRCPARAM L0000999     0.000001724      3.49      4.00      3.25
SRCPARAM L0001000     0.000001724      3.49      4.00      3.25
SRCPARAM L0001001     0.000001724      3.49      4.00      3.25
SRCPARAM L0001002     0.000001724      3.49      4.00      3.25
SRCPARAM L0001003     0.000001724      3.49      4.00      3.25
SRCPARAM L0001004     0.000001724      3.49      4.00      3.25
SRCPARAM L0001005     0.000001724      3.49      4.00      3.25
SRCPARAM L0001006     0.000001724      3.49      4.00      3.25
SRCPARAM L0001007     0.000001724      3.49      4.00      3.25
SRCPARAM L0001008     0.000001724      3.49      4.00      3.25
SRCPARAM L0001009     0.000001724      3.49      4.00      3.25
SRCPARAM L0001010     0.000001724      3.49      4.00      3.25
SRCPARAM L0001011     0.000001724      3.49      4.00      3.25
SRCPARAM L0001012     0.000001724      3.49      4.00      3.25
SRCPARAM L0001013     0.000001724      3.49      4.00      3.25
SRCPARAM L0001014     0.000001724      3.49      4.00      3.25
SRCPARAM L0001015     0.000001724      3.49      4.00      3.25
SRCPARAM L0001016     0.000001724      3.49      4.00      3.25
SRCPARAM L0001017     0.000001724      3.49      4.00      3.25
SRCPARAM L0001018     0.000001724      3.49      4.00      3.25
SRCPARAM L0001019     0.000001724      3.49      4.00      3.25
SRCPARAM L0001020     0.000001724      3.49      4.00      3.25
SRCPARAM L0001021     0.000001724      3.49      4.00      3.25
SRCPARAM L0001022     0.000001724      3.49      4.00      3.25
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SRCPARAM L0001023     0.000001724      3.49      4.00      3.25
SRCPARAM L0001024     0.000001724      3.49      4.00      3.25
SRCPARAM L0001025     0.000001724      3.49      4.00      3.25
SRCPARAM L0001026     0.000001724      3.49      4.00      3.25
SRCPARAM L0001027     0.000001724      3.49      4.00      3.25
SRCPARAM L0001028     0.000001724      3.49      4.00      3.25
SRCPARAM L0001029     0.000001724      3.49      4.00      3.25
SRCPARAM L0001030     0.000001724      3.49      4.00      3.25
SRCPARAM L0001031     0.000001724      3.49      4.00      3.25
SRCPARAM L0001032     0.000001724      3.49      4.00      3.25
SRCPARAM L0001033     0.000001724      3.49      4.00      3.25
SRCPARAM L0001034     0.000001724      3.49      4.00      3.25
SRCPARAM L0001035     0.000001724      3.49      4.00      3.25
SRCPARAM L0001036     0.000001724      3.49      4.00      3.25
SRCPARAM L0001037     0.000001724      3.49      4.00      3.25
SRCPARAM L0001038     0.000001724      3.49      4.00      3.25
SRCPARAM L0001039     0.000001724      3.49      4.00      3.25
SRCPARAM L0001040     0.000001724      3.49      4.00      3.25
SRCPARAM L0001041     0.000001724      3.49      4.00      3.25
SRCPARAM L0001042     0.000001724      3.49      4.00      3.25
SRCPARAM L0001043     0.000001724      3.49      4.00      3.25
SRCPARAM L0001044     0.000001724      3.49      4.00      3.25
SRCPARAM L0001045     0.000001724      3.49      4.00      3.25
SRCPARAM L0001046     0.000001724      3.49      4.00      3.25
SRCPARAM L0001047     0.000001724      3.49      4.00      3.25
SRCPARAM L0001048     0.000001724      3.49      4.00      3.25
SRCPARAM L0001049     0.000001724      3.49      4.00      3.25
SRCPARAM L0001050     0.000001724      3.49      4.00      3.25
SRCPARAM L0001051     0.000001724      3.49      4.00      3.25
SRCPARAM L0001052     0.000001724      3.49      4.00      3.25
SRCPARAM L0001053     0.000001724      3.49      4.00      3.25
SRCPARAM L0001054     0.000001724      3.49      4.00      3.25
SRCPARAM L0001055     0.000001724      3.49      4.00      3.25
SRCPARAM L0001056     0.000001724      3.49      4.00      3.25
SRCPARAM L0001057     0.000001724      3.49      4.00      3.25
SRCPARAM L0001058     0.000001724      3.49      4.00      3.25
SRCPARAM L0001059     0.000001724      3.49      4.00      3.25
SRCPARAM L0001060     0.000001724      3.49      4.00      3.25
SRCPARAM L0001061     0.000001724      3.49      4.00      3.25
SRCPARAM L0001062     0.000001724      3.49      4.00      3.25
SRCPARAM L0001063     0.000001724      3.49      4.00      3.25
SRCPARAM L0001064     0.000001724      3.49      4.00      3.25
SRCPARAM L0001065     0.000001724      3.49      4.00      3.25
SRCPARAM L0001066     0.000001724      3.49      4.00      3.25
SRCPARAM L0001067     0.000001724      3.49      4.00      3.25
SRCPARAM L0001068     0.000001724      3.49      4.00      3.25
SRCPARAM L0001069     0.000001724      3.49      4.00      3.25
SRCPARAM L0001070     0.000001724      3.49      4.00      3.25
SRCPARAM L0001071     0.000001724      3.49      4.00      3.25
SRCPARAM L0001072     0.000001724      3.49      4.00      3.25
SRCPARAM L0001073     0.000001724      3.49      4.00      3.25
SRCPARAM L0001074     0.000001724      3.49      4.00      3.25
SRCPARAM L0001075     0.000001724      3.49      4.00      3.25
SRCPARAM L0001076     0.000001724      3.49      4.00      3.25
SRCPARAM L0001077     0.000001724      3.49      4.00      3.25
SRCPARAM L0001078     0.000001724      3.49      4.00      3.25
SRCPARAM L0001079     0.000001724      3.49      4.00      3.25
SRCPARAM L0001080     0.000001724      3.49      4.00      3.25
SRCPARAM L0001081     0.000001724      3.49      4.00      3.25
SRCPARAM L0001082     0.000001724      3.49      4.00      3.25
SRCPARAM L0001083     0.000001724      3.49      4.00      3.25
SRCPARAM L0001084     0.000001724      3.49      4.00      3.25
SRCPARAM L0001085     0.000001724      3.49      4.00      3.25
SRCPARAM L0001086     0.000001724      3.49      4.00      3.25
SRCPARAM L0001087     0.000001724      3.49      4.00      3.25
SRCPARAM L0001088     0.000001724      3.49      4.00      3.25
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** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT L0001190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001190     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001190     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001191     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001191     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001192     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001192     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001193     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001193     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001194     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001194     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001195     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001195     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001196     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001196     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001197     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001197     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001198     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001198     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001199     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001199     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001200     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001200     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001201     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001201     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001202     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001202     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001203     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001203     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001204     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001204     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001205     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001205     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001206     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001206     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001207     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001207     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001208     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001208     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001209     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001209     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001210     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001210     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001211     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001211     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001211     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001212     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001212     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001213     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001213     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001214     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001214     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001215     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001215     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001216     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001216     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001217     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001217     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001218     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001218     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001218     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001219     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001219     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001219     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001220     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001220     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001221     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001221     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001222     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001222     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001222     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001223     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001223     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001223     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001224     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001224     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001224     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001225     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001225     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001226     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001227     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001228     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001229     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001230     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001231     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001232     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001233     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
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   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT L0000858     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000858     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000858     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000858     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000859     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000859     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000859     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000859     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000860     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000860     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000860     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000860     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000861     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0000861     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000861     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000861     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0000862     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000862     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000862     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000862     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000863     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000863     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000863     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0000863     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000864     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0000864     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0000864     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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SO FINISHED
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** AERMOD Receptor Pathway
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RE STARTING
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RE FINISHED
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** AERMOD Meteorology Pathway
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** AERMOD View Ver. 11.0.0
** Lakes Environmental Software Inc.
** Date: 9/19/2022
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** Source ID - Type - X Coord. - Y Coord. **
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** PREFIX
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** Configuration = Adjacent
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LOCATION L0001024 VOLUME 465500.553 3810543.665 1048.42
LOCATION L0001025 VOLUME 465492.018 3810542.691 1048.45
LOCATION L0001026 VOLUME 465483.485 3810541.710 1048.48
LOCATION L0001027 VOLUME 465474.951 3810540.729 1048.52
LOCATION L0001028 VOLUME 465466.417 3810539.748 1049.00
LOCATION L0001029 VOLUME 465457.828 3810539.683 1049.04
LOCATION L0001030 VOLUME 465449.239 3810539.641 1049.19
LOCATION L0001031 VOLUME 465440.649 3810539.600 1049.35
LOCATION L0001032 VOLUME 465432.059 3810539.558 1049.51
LOCATION L0001033 VOLUME 465423.469 3810539.517 1049.65
LOCATION L0001034 VOLUME 465414.879 3810539.475 1049.78
LOCATION L0001035 VOLUME 465406.289 3810539.434 1049.91
LOCATION L0001036 VOLUME 465397.699 3810539.392 1050.04
LOCATION L0001037 VOLUME 465389.109 3810539.351 1050.20
LOCATION L0001038 VOLUME 465380.519 3810539.310 1050.36
LOCATION L0001039 VOLUME 465371.929 3810539.268 1050.52
LOCATION L0001040 VOLUME 465363.340 3810539.227 1050.56
LOCATION L0001041 VOLUME 465354.750 3810539.185 1050.56
LOCATION L0001042 VOLUME 465346.160 3810539.144 1050.56
LOCATION L0001043 VOLUME 465337.570 3810539.102 1050.60
LOCATION L0001044 VOLUME 465328.980 3810539.061 1050.72
LOCATION L0001045 VOLUME 465320.390 3810539.019 1050.85
LOCATION L0001046 VOLUME 465311.800 3810538.978 1050.97
LOCATION L0001047 VOLUME 465303.210 3810538.936 1051.13
LOCATION L0001048 VOLUME 465294.620 3810538.895 1051.29
LOCATION L0001049 VOLUME 465286.030 3810538.854 1051.45
LOCATION L0001050 VOLUME 465277.441 3810538.812 1051.61
LOCATION L0001051 VOLUME 465268.851 3810538.771 1051.73
LOCATION L0001052 VOLUME 465260.261 3810538.729 1051.85
LOCATION L0001053 VOLUME 465251.671 3810538.688 1051.98
LOCATION L0001054 VOLUME 465243.081 3810538.646 1052.00
LOCATION L0001055 VOLUME 465234.491 3810538.605 1052.00
LOCATION L0001056 VOLUME 465225.901 3810538.563 1052.00
LOCATION L0001057 VOLUME 465217.311 3810538.522 1052.00
LOCATION L0001058 VOLUME 465208.721 3810538.481 1052.00
LOCATION L0001059 VOLUME 465200.131 3810538.439 1052.00
LOCATION L0001060 VOLUME 465191.542 3810538.398 1052.00
LOCATION L0001061 VOLUME 465182.952 3810538.356 1052.23
LOCATION L0001062 VOLUME 465174.362 3810538.315 1052.52
LOCATION L0001063 VOLUME 465165.772 3810538.273 1052.81
LOCATION L0001064 VOLUME 465157.182 3810538.232 1053.00
LOCATION L0001065 VOLUME 465148.592 3810538.190 1053.00
LOCATION L0001066 VOLUME 465140.002 3810538.164 1053.00
LOCATION L0001067 VOLUME 465131.412 3810538.164 1053.00
LOCATION L0001068 VOLUME 465122.822 3810538.164 1053.24
LOCATION L0001069 VOLUME 465114.232 3810538.164 1053.53
LOCATION L0001070 VOLUME 465105.642 3810538.164 1053.81
LOCATION L0001071 VOLUME 465097.052 3810538.164 1054.00
LOCATION L0001072 VOLUME 465088.462 3810538.164 1054.00
LOCATION L0001073 VOLUME 465079.872 3810538.164 1054.00
LOCATION L0001074 VOLUME 465071.282 3810538.164 1054.00
LOCATION L0001075 VOLUME 465062.692 3810538.164 1054.00

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   LOCATION L0001076     VOLUME   465054.102 3810538.164 1054.00
   LOCATION L0001077     VOLUME   465045.512 3810538.164 1054.00
   LOCATION L0001078     VOLUME   465036.922 3810538.164 1054.10
   LOCATION L0001079     VOLUME   465028.343 3810537.768 1054.39
   LOCATION L0001080     VOLUME   465019.767 3810537.289 1054.67
   LOCATION L0001081     VOLUME   465011.190 3810536.809 1054.96
   LOCATION L0001082     VOLUME   465002.613 3810536.330 1055.16
   LOCATION L0001083     VOLUME   464994.037 3810535.850 1055.36
   LOCATION L0001084     VOLUME   464985.460 3810535.371 1055.56
   LOCATION L0001085     VOLUME   464976.884 3810534.891 1055.73
   LOCATION L0001086     VOLUME   464968.382 3810533.814 1055.84
   LOCATION L0001087     VOLUME   464959.954 3810532.156 1055.93
   LOCATION L0001088     VOLUME   464951.525 3810530.498 1055.99
** End of LINE VOLUME Source ID = SLINE7
** Source Parameters **
** LINE VOLUME Source ID = SLINE6
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   SRCPARAM L0001191     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001193     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001194     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001195     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001196     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001197     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001198     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001199     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001200     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001202     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001204     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001212     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001213     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001214     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001215     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001218     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001222     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001223     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001224     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001225     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001226     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001227     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001228     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001229     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001230     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001231     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001232     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001233     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001234     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001235     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001236     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001237     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001238     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001239     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001240     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001241     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001242     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001243     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001244     0.000006033      3.49      6.51      3.25
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   SRCPARAM L0001246     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001247     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001248     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001249     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001250     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001251     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001252     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001253     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001254     0.000006033      3.49      6.51      3.25
   SRCPARAM L0001255     0.000006033      3.49      6.51      3.25
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   SRCPARAM VOL1         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL2         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL3         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL4         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL5         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL6         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL7         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL8         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL9         0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL10        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL11        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL12        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL13        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL14        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL15        0.0009642775     5.000    21.842     1.400
   SRCPARAM VOL16        0.0009642775     5.000    21.842     1.400
** LINE VOLUME Source ID = SLINE7
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   SRCPARAM L0000859     0.000001724      3.49      4.00      3.25
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   SRCPARAM L0000862     0.000001724      3.49      4.00      3.25
   SRCPARAM L0000863     0.000001724      3.49      4.00      3.25
   SRCPARAM L0000864     0.000001724      3.49      4.00      3.25
   SRCPARAM L0000865     0.000001724      3.49      4.00      3.25
   SRCPARAM L0000866     0.000001724      3.49      4.00      3.25
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   SRCPARAM L0000870     0.000001724      3.49      4.00      3.25
   SRCPARAM L0000871     0.000001724      3.49      4.00      3.25
   SRCPARAM L0000872     0.000001724      3.49      4.00      3.25
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   SRCPARAM L0000889     0.000001724      3.49      4.00      3.25
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SRCPARAM L0001003     0.000001724      3.49      4.00      3.25
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SRCPARAM L0001006     0.000001724      3.49      4.00      3.25
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SRCPARAM L0001008     0.000001724      3.49      4.00      3.25
SRCPARAM L0001009     0.000001724      3.49      4.00      3.25
SRCPARAM L0001010     0.000001724      3.49      4.00      3.25
SRCPARAM L0001011     0.000001724      3.49      4.00      3.25
SRCPARAM L0001012     0.000001724      3.49      4.00      3.25
SRCPARAM L0001013     0.000001724      3.49      4.00      3.25
SRCPARAM L0001014     0.000001724      3.49      4.00      3.25
SRCPARAM L0001015     0.000001724      3.49      4.00      3.25
SRCPARAM L0001016     0.000001724      3.49      4.00      3.25
SRCPARAM L0001017     0.000001724      3.49      4.00      3.25
SRCPARAM L0001018     0.000001724      3.49      4.00      3.25
SRCPARAM L0001019     0.000001724      3.49      4.00      3.25
SRCPARAM L0001020     0.000001724      3.49      4.00      3.25
SRCPARAM L0001021     0.000001724      3.49      4.00      3.25
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SRCPARAM L0001022     0.000001724      3.49      4.00      3.25
SRCPARAM L0001023     0.000001724      3.49      4.00      3.25
SRCPARAM L0001024     0.000001724      3.49      4.00      3.25
SRCPARAM L0001025     0.000001724      3.49      4.00      3.25
SRCPARAM L0001026     0.000001724      3.49      4.00      3.25
SRCPARAM L0001027     0.000001724      3.49      4.00      3.25
SRCPARAM L0001028     0.000001724      3.49      4.00      3.25
SRCPARAM L0001029     0.000001724      3.49      4.00      3.25
SRCPARAM L0001030     0.000001724      3.49      4.00      3.25
SRCPARAM L0001031     0.000001724      3.49      4.00      3.25
SRCPARAM L0001032     0.000001724      3.49      4.00      3.25
SRCPARAM L0001033     0.000001724      3.49      4.00      3.25
SRCPARAM L0001034     0.000001724      3.49      4.00      3.25
SRCPARAM L0001035     0.000001724      3.49      4.00      3.25
SRCPARAM L0001036     0.000001724      3.49      4.00      3.25
SRCPARAM L0001037     0.000001724      3.49      4.00      3.25
SRCPARAM L0001038     0.000001724      3.49      4.00      3.25
SRCPARAM L0001039     0.000001724      3.49      4.00      3.25
SRCPARAM L0001040     0.000001724      3.49      4.00      3.25
SRCPARAM L0001041     0.000001724      3.49      4.00      3.25
SRCPARAM L0001042     0.000001724      3.49      4.00      3.25
SRCPARAM L0001043     0.000001724      3.49      4.00      3.25
SRCPARAM L0001044     0.000001724      3.49      4.00      3.25
SRCPARAM L0001045     0.000001724      3.49      4.00      3.25
SRCPARAM L0001046     0.000001724      3.49      4.00      3.25
SRCPARAM L0001047     0.000001724      3.49      4.00      3.25
SRCPARAM L0001048     0.000001724      3.49      4.00      3.25
SRCPARAM L0001049     0.000001724      3.49      4.00      3.25
SRCPARAM L0001050     0.000001724      3.49      4.00      3.25
SRCPARAM L0001051     0.000001724      3.49      4.00      3.25
SRCPARAM L0001052     0.000001724      3.49      4.00      3.25
SRCPARAM L0001053     0.000001724      3.49      4.00      3.25
SRCPARAM L0001054     0.000001724      3.49      4.00      3.25
SRCPARAM L0001055     0.000001724      3.49      4.00      3.25
SRCPARAM L0001056     0.000001724      3.49      4.00      3.25
SRCPARAM L0001057     0.000001724      3.49      4.00      3.25
SRCPARAM L0001058     0.000001724      3.49      4.00      3.25
SRCPARAM L0001059     0.000001724      3.49      4.00      3.25
SRCPARAM L0001060     0.000001724      3.49      4.00      3.25
SRCPARAM L0001061     0.000001724      3.49      4.00      3.25
SRCPARAM L0001062     0.000001724      3.49      4.00      3.25
SRCPARAM L0001063     0.000001724      3.49      4.00      3.25
SRCPARAM L0001064     0.000001724      3.49      4.00      3.25
SRCPARAM L0001065     0.000001724      3.49      4.00      3.25
SRCPARAM L0001066     0.000001724      3.49      4.00      3.25
SRCPARAM L0001067     0.000001724      3.49      4.00      3.25
SRCPARAM L0001068     0.000001724      3.49      4.00      3.25
SRCPARAM L0001069     0.000001724      3.49      4.00      3.25
SRCPARAM L0001070     0.000001724      3.49      4.00      3.25
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SRCPARAM L0001073     0.000001724      3.49      4.00      3.25
SRCPARAM L0001074     0.000001724      3.49      4.00      3.25
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SRCPARAM L0001076     0.000001724      3.49      4.00      3.25
SRCPARAM L0001077     0.000001724      3.49      4.00      3.25
SRCPARAM L0001078     0.000001724      3.49      4.00      3.25
SRCPARAM L0001079     0.000001724      3.49      4.00      3.25
SRCPARAM L0001080     0.000001724      3.49      4.00      3.25
SRCPARAM L0001081     0.000001724      3.49      4.00      3.25
SRCPARAM L0001082     0.000001724      3.49      4.00      3.25
SRCPARAM L0001083     0.000001724      3.49      4.00      3.25
SRCPARAM L0001084     0.000001724      3.49      4.00      3.25
SRCPARAM L0001085     0.000001724      3.49      4.00      3.25
SRCPARAM L0001086     0.000001724      3.49      4.00      3.25
SRCPARAM L0001087     0.000001724      3.49      4.00      3.25
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   SRCPARAM L0001088     0.000001724      3.49      4.00      3.25
** ------------------------------------------------------------------

** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
   EMISFACT L0001190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001190     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001190     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001190     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001191     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001191     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001191     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001192     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001192     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001192     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001193     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001193     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001193     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001194     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001194     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001194     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001195     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001195     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001195     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001196     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001196     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001196     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001197     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001197     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001197     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001198     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001198     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001198     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001199     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001199     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001199     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001200     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001200     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001200     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001201     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001201     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001201     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001202     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001202     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001202     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001203     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001203     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001203     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001204     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0001204     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0001204     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001205     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001205     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001206     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001206     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001206     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001207     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001207     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001207     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001208     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001208     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001208     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001209     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001209     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001209     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001210     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001210     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001210     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001212     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001212     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001213     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001213     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001213     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001214     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001214     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT L0001214     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001215     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001215     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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EMISFACT L0001216     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001221     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001221     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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EMISFACT L0001237     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001234     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001235     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001236     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001237     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001238     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001239     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001240     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001241     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001242     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001243     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001244     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001245     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001246     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001247     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001248     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001249     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001250     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001251     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001252     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT L0001253     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001254     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT L0001255     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Sunday:
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16        HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
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   EMISFACT L0000858     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000858     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000859     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT L0000859     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000860     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT L0000861     HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT L0000861     HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT L0001088     HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED "14848 Construction.rou"
RE FINISHED
**
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** AERMOD Meteorology Pathway
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**
**
ME STARTING
   SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
   PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
   SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
   UAIRDATA 3120 2015
   PROFBASE 588.3 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14848 CONSTRUCTION.AD\AN00GALL.PLT" 31
   SUMMFILE "14848 Construction.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    4563       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    4563       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 *********************************
 *** SETUP Finishes Successfully ***
 *********************************

FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

                      PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
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     * Use Calms Processing Routine.
     * Use Missing Data Processing Routine.
     * No Exponential Decay.
     * Model Uses RURAL Dispersion Only.
     * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
     * CCVR_Sub - Meteorological data includes CCVR substitutions
     * TEMP_Sub - Meteorological data includes TEMP substitutions
     * Model Assumes No FLAGPOLE Receptor Heights.
     * The User Specified a Pollutant Type of: DPM

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:    313 Source(s);       1 Source Group(s); and      39 Receptor(s)

               with:      0 POINT(s), including
                          0 POINTCAP(s) and      0 POINTHOR(s)
                and:    313 VOLUME source(s)
                and:      0 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 RLINE/RLINEXT source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  19191

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing
                                                                 Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   588.30 ;  Decay Coef. =
 0.000     ;  Rot. Angle =     0.0
                Emission Units = GRAMS/SEC                                ;  Emission Rate
                Unit Factor =   0.10000E+07
                Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.8 MB of RAM.

 **Input Runstream File:
 aermod.inp
 **Output Print File:
 aermod.out

 **Detailed Error/Message File:   14848
 Construction.err
 **File for Summary of Results:   14848
 Construction.sum
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       11:12:53

                     PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                *** VOLUME SOURCE DATA ***
```

SOURCE ID	NUMBER URBAN PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	SOURCE SCALAR VARY BY	SOURCE CATS.
L0001190	0	0.60330E-05	464939.9	3809792.7	1064.1	3.49	6.51	3.25	NO	HRDOW
L0001191	0	0.60330E-05	464925.9	3809792.6	1064.4	3.49	6.51	3.25	NO	HRDOW
L0001192	0	0.60330E-05	464911.9	3809792.6	1064.6	3.49	6.51	3.25	NO	HRDOW
L0001193	0	0.60330E-05	464897.9	3809792.6	1064.8	3.49	6.51	3.25	NO	HRDOW
L0001194	0	0.60330E-05	464883.9	3809792.6	1065.0	3.49	6.51	3.25	NO	HRDOW
L0001195	0	0.60330E-05	464869.9	3809792.6	1065.0	3.49	6.51	3.25	NO	HRDOW
L0001196	0	0.60330E-05	464855.9	3809792.5	1065.1	3.49	6.51	3.25	NO	HRDOW
L0001197	0	0.60330E-05	464841.9	3809792.5	1065.3	3.49	6.51	3.25	NO	HRDOW
L0001198	0	0.60330E-05	464827.9	3809792.5	1065.5	3.49	6.51	3.25	NO	HRDOW
L0001199	0	0.60330E-05	464813.9	3809792.5	1065.7	3.49	6.51	3.25	NO	HRDOW
L0001200	0	0.60330E-05	464799.9	3809792.4	1066.0	3.49	6.51	3.25	NO	HRDOW
L0001201	0	0.60330E-05	464785.9	3809792.4	1066.0	3.49	6.51	3.25	NO	HRDOW
L0001202	0	0.60330E-05	464771.9	3809792.4	1066.0	3.49	6.51	3.25	NO	HRDOW
L0001203	0	0.60330E-05	464757.9	3809792.4	1066.2	3.49	6.51	3.25	NO	HRDOW
L0001204	0	0.60330E-05	464743.9	3809792.4	1066.4	3.49	6.51	3.25	NO	HRDOW
L0001205	0	0.60330E-05	464736.8	3809785.5	1066.7	3.49	6.51	3.25	NO	HRDOW
L0001206	0	0.60330E-05	464736.8	3809771.5	1067.0	3.49	6.51	3.25	NO	HRDOW
L0001207	0	0.60330E-05	464736.8	3809757.5	1067.0	3.49	6.51	3.25	NO	HRDOW
L0001208	0	0.60330E-05	464736.9	3809743.5	1067.0	3.49	6.51	3.25	NO	HRDOW
L0001209	0	0.60330E-05	464736.9	3809729.5	1067.1	3.49	6.51	3.25	NO	HRDOW
L0001210	0	0.60330E-05	464736.9	3809715.5	1067.1	3.49	6.51	3.25	NO	HRDOW
L0001211	0	0.60330E-05	464736.9	3809701.5	1067.5	3.49	6.51	3.25	NO	HRDOW
L0001212	0	0.60330E-05	464736.9	3809687.5	1068.0	3.49	6.51	3.25	NO	HRDOW
L0001213	0	0.60330E-05	464737.0	3809673.5	1068.0	3.49	6.51	3.25	NO	HRDOW
L0001214	0	0.60330E-05	464737.0	3809659.5	1068.0	3.49	6.51	3.25	NO	HRDOW
L0001215	0	0.60330E-05	464737.0	3809645.5	1068.3	3.49	6.51	3.25	NO	HRDOW
L0001216	0	0.60330E-05	464737.0	3809631.5	1068.8	3.49	6.51	3.25	NO	HRDOW
L0001217	0	0.60330E-05	464737.0	3809617.5	1069.0	3.49	6.51	3.25	NO	HRDOW

```
 L0001218         0   0.60330E-05  464737.0 3809603.5  1069.1     3.49     6.51     3.25
 NO    HRDOW
 L0001219         0   0.60330E-05  464737.1 3809589.5  1069.3     3.49     6.51     3.25
 NO    HRDOW
 L0001220         0   0.60330E-05  464737.1 3809575.5  1069.7     3.49     6.51     3.25
 NO    HRDOW
 L0001221         0   0.60330E-05  464737.1 3809561.5  1070.0     3.49     6.51     3.25
 NO    HRDOW
 L0001222         0   0.60330E-05  464737.1 3809547.5  1070.0     3.49     6.51     3.25
 NO    HRDOW
 L0001223         0   0.60330E-05  464737.5 3809533.9  1070.0     3.49     6.51     3.25
 NO    HRDOW
 L0001224         0   0.60330E-05  464751.5 3809534.1  1070.0     3.49     6.51     3.25
 NO    HRDOW
 L0001225         0   0.60330E-05  464765.5 3809534.3  1070.0     3.49     6.51     3.25
 NO    HRDOW
 L0001226         0   0.60330E-05  464779.5 3809534.5  1070.0     3.49     6.51     3.25
 NO    HRDOW
 L0001227         0   0.60330E-05  464793.5 3809534.7  1070.0     3.49     6.51     3.25
 NO    HRDOW
 L0001228         0   0.60330E-05  464807.5 3809534.9  1069.8     3.49     6.51     3.25
 NO    HRDOW
 L0001229         0   0.60330E-05  464821.5 3809535.2  1069.3     3.49     6.51     3.25
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                     PAGE   3
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                  *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
  SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
  SOURCE  SCALAR VARY
    ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - -

 L0001230         0   0.60330E-05  464835.5 3809535.4  1069.0     3.49     6.51     3.25
 NO    HRDOW
 L0001231         0   0.60330E-05  464849.5 3809536.0  1069.0     3.49     6.51     3.25
 NO    HRDOW
 L0001232         0   0.60330E-05  464863.5 3809536.7  1069.0     3.49     6.51     3.25
 NO    HRDOW
 L0001233         0   0.60330E-05  464877.5 3809537.5  1069.0     3.49     6.51     3.25
 NO    HRDOW
 L0001234         0   0.60330E-05  464891.4 3809538.3  1068.9     3.49     6.51     3.25
 NO    HRDOW
 L0001235         0   0.60330E-05  464905.4 3809539.0  1068.9     3.49     6.51     3.25
 NO    HRDOW
 L0001236         0   0.60330E-05  464919.4 3809539.8  1068.9     3.49     6.51     3.25
 NO    HRDOW
 L0001237         0   0.60330E-05  464933.4 3809540.6  1068.5     3.49     6.51     3.25
 NO    HRDOW
 L0001238         0   0.60330E-05  464947.4 3809541.4  1068.1     3.49     6.51     3.25
 NO    HRDOW
 L0001239         0   0.60330E-05  464961.4 3809541.8  1068.0     3.49     6.51     3.25
 NO    HRDOW
 L0001240         0   0.60330E-05  464975.4 3809541.9  1068.0     3.49     6.51     3.25
 NO    HRDOW
```

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 L0001241         0   0.60330E-05  464989.4 3809542.1  1068.0     3.49     6.51     3.25
 NO    HRDOW
 L0001242         0   0.60330E-05  465003.3 3809542.2  1068.0     3.49     6.51     3.25
 NO    HRDOW
 L0001243         0   0.60330E-05  465017.3 3809542.5  1068.0     3.49     6.51     3.25
 NO    HRDOW
 L0001244         0   0.60330E-05  465031.3 3809542.8  1068.0     3.49     6.51     3.25
 NO    HRDOW
 L0001245         0   0.60330E-05  465045.3 3809543.1  1068.0     3.49     6.51     3.25
 NO    HRDOW
 L0001246         0   0.60330E-05  465059.3 3809543.4  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001247         0   0.60330E-05  465073.3 3809543.4  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001248         0   0.60330E-05  465087.3 3809543.0  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001249         0   0.60330E-05  465101.3 3809542.6  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001250         0   0.60330E-05  465115.3 3809542.2  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001251         0   0.60330E-05  465129.3 3809541.8  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001252         0   0.60330E-05  465143.3 3809541.4  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001253         0   0.60330E-05  465157.3 3809540.6  1067.8     3.49     6.51     3.25
 NO    HRDOW
 L0001254         0   0.60330E-05  465171.3 3809539.8  1067.5     3.49     6.51     3.25
 NO    HRDOW
 L0001255         0   0.60330E-05  465185.2 3809539.0  1067.1     3.49     6.51     3.25
 NO    HRDOW
 VOL1             0   0.96428E-03  465065.4 3810685.3  1052.7     5.00    21.84     1.40
 NO    HRDOW
 VOL2             0   0.96428E-03  465159.2 3810684.7  1051.7     5.00    21.84     1.40
 NO    HRDOW
 VOL3             0   0.96428E-03  465253.6 3810684.4  1050.0     5.00    21.84     1.40
 NO    HRDOW
 VOL4             0   0.96428E-03  465347.9 3810684.4  1048.5     5.00    21.84     1.40
 NO    HRDOW
 VOL5             0   0.96428E-03  465441.9 3810684.7  1047.4     5.00    21.84     1.40
 NO    HRDOW
 VOL6             0   0.96428E-03  465535.5 3810685.4  1046.0     5.00    21.84     1.40
 NO    HRDOW
 VOL7             0   0.96428E-03  465629.5 3810685.4  1044.8     5.00    21.84     1.40
 NO    HRDOW
 VOL8             0   0.96428E-03  465680.0 3810685.4  1044.5     5.00    21.84     1.40
 NO    HRDOW
 VOL9             0   0.96428E-03  465610.8 3810631.8  1046.0     5.00    21.84     1.40
 NO    HRDOW
 VOL10            0   0.96428E-03  465516.5 3810591.4  1047.8     5.00    21.84     1.40
 NO    HRDOW
 VOL11            0   0.96428E-03  465422.5 3810591.4  1048.9     5.00    21.84     1.40
 NO    HRDOW
 VOL12            0   0.96428E-03  465328.9 3810591.1  1050.0     5.00    21.84     1.40
 NO    HRDOW
 VOL13            0   0.96428E-03  465234.9 3810590.4  1051.4     5.00    21.84     1.40
 NO    HRDOW
 VOL14            0   0.96428E-03  465140.6 3810591.4  1052.6     5.00    21.84     1.40
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
```

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE SCALAR VARY BY	EMISSION RATE PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
VOL15	0		0.96428E-03	465046.6	3810591.4	1054.0	5.00	21.84	1.40
NO	HRDOW								
VOL16	0		0.96428E-03	464963.1	3810591.4	1055.0	5.00	21.84	1.40
NO	HRDOW								
L0000858	0		0.17240E-05	464952.4	3809792.3	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000859	0		0.17240E-05	464961.0	3809792.2	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000860	0		0.17240E-05	464969.6	3809792.1	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000861	0		0.17240E-05	464978.2	3809792.0	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000862	0		0.17240E-05	464986.7	3809791.9	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000863	0		0.17240E-05	464995.3	3809791.7	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000864	0		0.17240E-05	465003.9	3809791.6	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000865	0		0.17240E-05	465012.5	3809791.5	1064.0	3.49	4.00	3.25
NO	HRDOW								
L0000866	0		0.17240E-05	465021.1	3809791.4	1063.8	3.49	4.00	3.25
NO	HRDOW								
L0000867	0		0.17240E-05	465029.7	3809791.3	1063.7	3.49	4.00	3.25
NO	HRDOW								
L0000868	0		0.17240E-05	465038.3	3809791.1	1063.5	3.49	4.00	3.25
NO	HRDOW								
L0000869	0		0.17240E-05	465046.9	3809791.0	1063.5	3.49	4.00	3.25
NO	HRDOW								
L0000870	0		0.17240E-05	465055.5	3809790.9	1063.5	3.49	4.00	3.25
NO	HRDOW								
L0000871	0		0.17240E-05	465064.0	3809790.9	1063.5	3.49	4.00	3.25
NO	HRDOW								
L0000872	0		0.17240E-05	465072.6	3809791.2	1063.5	3.49	4.00	3.25
NO	HRDOW								
L0000873	0		0.17240E-05	465081.2	3809791.4	1063.5	3.49	4.00	3.25
NO	HRDOW								
L0000874	0		0.17240E-05	465089.8	3809791.9	1063.5	3.49	4.00	3.25
NO	HRDOW								
L0000875	0		0.17240E-05	465098.3	3809793.2	1063.4	3.49	4.00	3.25
NO	HRDOW								
L0000876	0		0.17240E-05	465106.8	3809794.6	1063.3	3.49	4.00	3.25
NO	HRDOW								
L0000877	0		0.17240E-05	465115.1	3809796.6	1063.1	3.49	4.00	3.25
NO	HRDOW								
L0000878	0		0.17240E-05	465123.5	3809798.5	1063.0	3.49	4.00	3.25
NO	HRDOW								
L0000879	0		0.17240E-05	465131.4	3809801.7	1063.0	3.49	4.00	3.25
NO	HRDOW								
L0000880	0		0.17240E-05	465139.4	3809805.0	1062.7	3.49	4.00	3.25
NO	HRDOW								
L0000881	0		0.17240E-05	465147.3	3809808.3	1062.4	3.49	4.00	3.25
NO	HRDOW								
L0000882	0		0.17240E-05	465155.1	3809811.9	1062.1	3.49	4.00	3.25
NO	HRDOW								

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 L0000883         0   0.17240E-05  465162.5 3809816.2  1062.0     3.49     4.00     3.25
 NO    HRDOW
 L0000884         0   0.17240E-05  465170.0 3809820.5  1062.0     3.49     4.00     3.25
 NO    HRDOW
 L0000885         0   0.17240E-05  465177.0 3809825.4  1062.0     3.49     4.00     3.25
 NO    HRDOW
 L0000886         0   0.17240E-05  465183.4 3809831.1  1062.0     3.49     4.00     3.25
 NO    HRDOW
 L0000887         0   0.17240E-05  465189.8 3809836.9  1062.0     3.49     4.00     3.25
 NO    HRDOW
 L0000888         0   0.17240E-05  465196.2 3809842.6  1061.8     3.49     4.00     3.25
 NO    HRDOW
 L0000889         0   0.17240E-05  465201.9 3809849.0  1061.6     3.49     4.00     3.25
 NO    HRDOW
 L0000890         0   0.17240E-05  465207.4 3809855.6  1061.3     3.49     4.00     3.25
 NO    HRDOW
 L0000891         0   0.17240E-05  465212.9 3809862.2  1061.1     3.49     4.00     3.25
 NO    HRDOW
 L0000892         0   0.17240E-05  465218.3 3809868.8  1060.9     3.49     4.00     3.25
 NO    HRDOW
 L0000893         0   0.17240E-05  465223.7 3809875.5  1060.7     3.49     4.00     3.25
 NO    HRDOW
 L0000894         0   0.17240E-05  465228.8 3809882.5  1060.6     3.49     4.00     3.25
 NO    HRDOW
 L0000895         0   0.17240E-05  465233.8 3809889.4  1060.6     3.49     4.00     3.25
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                  *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
   SOURCE      PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
   SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - -

 L0000896         0   0.17240E-05  465238.8 3809896.4  1060.6     3.49     4.00     3.25
 NO    HRDOW
 L0000897         0   0.17240E-05  465243.9 3809903.3  1060.6     3.49     4.00     3.25
 NO    HRDOW
 L0000898         0   0.17240E-05  465248.9 3809910.3  1060.5     3.49     4.00     3.25
 NO    HRDOW
 L0000899         0   0.17240E-05  465254.0 3809917.2  1060.2     3.49     4.00     3.25
 NO    HRDOW
 L0000900         0   0.17240E-05  465259.0 3809924.2  1060.0     3.49     4.00     3.25
 NO    HRDOW
 L0000901         0   0.17240E-05  465264.0 3809931.2  1059.9     3.49     4.00     3.25
 NO    HRDOW
 L0000902         0   0.17240E-05  465268.8 3809938.3  1059.7     3.49     4.00     3.25
 NO    HRDOW
 L0000903         0   0.17240E-05  465273.5 3809945.5  1059.5     3.49     4.00     3.25
 NO    HRDOW
 L0000904         0   0.17240E-05  465278.3 3809952.6  1059.2     3.49     4.00     3.25
 NO    HRDOW
 L0000905         0   0.17240E-05  465283.1 3809959.7  1059.0     3.49     4.00     3.25
 NO    HRDOW
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 L0000906         0   0.17240E-05  465287.9 3809966.9  1058.9     3.49     4.00     3.25
 NO    HRDOW
 L0000907         0   0.17240E-05  465292.6 3809974.0  1058.8     3.49     4.00     3.25
 NO    HRDOW
 L0000908         0   0.17240E-05  465297.4 3809981.2  1058.5     3.49     4.00     3.25
 NO    HRDOW
 L0000909         0   0.17240E-05  465302.2 3809988.3  1058.2     3.49     4.00     3.25
 NO    HRDOW
 L0000910         0   0.17240E-05  465306.9 3809995.5  1058.1     3.49     4.00     3.25
 NO    HRDOW
 L0000911         0   0.17240E-05  465311.7 3810002.6  1058.0     3.49     4.00     3.25
 NO    HRDOW
 L0000912         0   0.17240E-05  465316.5 3810009.7  1058.0     3.49     4.00     3.25
 NO    HRDOW
 L0000913         0   0.17240E-05  465321.3 3810016.9  1058.0     3.49     4.00     3.25
 NO    HRDOW
 L0000914         0   0.17240E-05  465326.0 3810024.0  1057.9     3.49     4.00     3.25
 NO    HRDOW
 L0000915         0   0.17240E-05  465330.7 3810031.2  1057.6     3.49     4.00     3.25
 NO    HRDOW
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 NO    HRDOW
 L0000917         0   0.17240E-05  465340.1 3810045.6  1057.0     3.49     4.00     3.25
 NO    HRDOW
 L0000918         0   0.17240E-05  465344.8 3810052.8  1057.0     3.49     4.00     3.25
 NO    HRDOW
 L0000919         0   0.17240E-05  465349.5 3810060.0  1057.0     3.49     4.00     3.25
 NO    HRDOW
 L0000920         0   0.17240E-05  465354.2 3810067.2  1057.0     3.49     4.00     3.25
 NO    HRDOW
 L0000921         0   0.17240E-05  465358.9 3810074.4  1057.0     3.49     4.00     3.25
 NO    HRDOW
 L0000922         0   0.17240E-05  465363.5 3810081.6  1056.8     3.49     4.00     3.25
 NO    HRDOW
 L0000923         0   0.17240E-05  465368.2 3810088.8  1056.6     3.49     4.00     3.25
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 L0000924         0   0.17240E-05  465372.9 3810096.0  1056.3     3.49     4.00     3.25
 NO    HRDOW
 L0000925         0   0.17240E-05  465377.6 3810103.2  1056.1     3.49     4.00     3.25
 NO    HRDOW
 L0000926         0   0.17240E-05  465382.3 3810110.4  1056.0     3.49     4.00     3.25
 NO    HRDOW
 L0000927         0   0.17240E-05  465387.0 3810117.6  1056.0     3.49     4.00     3.25
 NO    HRDOW
 L0000928         0   0.17240E-05  465391.7 3810124.8  1056.0     3.49     4.00     3.25
 NO    HRDOW
 L0000929         0   0.17240E-05  465396.4 3810132.0  1056.0     3.49     4.00     3.25
 NO    HRDOW
 L0000930         0   0.17240E-05  465401.1 3810139.2  1055.9     3.49     4.00     3.25
 NO    HRDOW
 L0000931         0   0.17240E-05  465405.8 3810146.4  1055.5     3.49     4.00     3.25
 NO    HRDOW
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 NO    HRDOW
 L0000933         0   0.17240E-05  465415.1 3810160.8  1055.1     3.49     4.00     3.25
 NO    HRDOW
 L0000934         0   0.17240E-05  465419.8 3810168.0  1054.9     3.49     4.00     3.25
 NO    HRDOW
 L0000935         0   0.17240E-05  465424.5 3810175.2  1054.7     3.49     4.00     3.25
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	SCALAR VARY BY
L0000936	0	0.17240E-05	465429.2	3810182.4	1054.5	3.49	4.00	3.25	NO HRDOW
L0000937	0	0.17240E-05	465433.8	3810189.6	1054.2	3.49	4.00	3.25	NO HRDOW
L0000938	0	0.17240E-05	465438.5	3810196.8	1054.0	3.49	4.00	3.25	NO HRDOW
L0000939	0	0.17240E-05	465443.2	3810204.0	1054.0	3.49	4.00	3.25	NO HRDOW
L0000940	0	0.17240E-05	465447.9	3810211.2	1054.0	3.49	4.00	3.25	NO HRDOW
L0000941	0	0.17240E-05	465452.5	3810218.4	1054.0	3.49	4.00	3.25	NO HRDOW
L0000942	0	0.17240E-05	465457.2	3810225.6	1054.0	3.49	4.00	3.25	NO HRDOW
L0000943	0	0.17240E-05	465461.9	3810232.8	1053.8	3.49	4.00	3.25	NO HRDOW
L0000944	0	0.17240E-05	465466.6	3810240.0	1053.5	3.49	4.00	3.25	NO HRDOW
L0000945	0	0.17240E-05	465471.2	3810247.2	1053.3	3.49	4.00	3.25	NO HRDOW
L0000946	0	0.17240E-05	465475.9	3810254.5	1053.1	3.49	4.00	3.25	NO HRDOW
L0000947	0	0.17240E-05	465480.6	3810261.7	1053.0	3.49	4.00	3.25	NO HRDOW
L0000948	0	0.17240E-05	465485.3	3810268.9	1053.0	3.49	4.00	3.25	NO HRDOW
L0000949	0	0.17240E-05	465489.9	3810276.1	1053.0	3.49	4.00	3.25	NO HRDOW
L0000950	0	0.17240E-05	465494.6	3810283.3	1052.9	3.49	4.00	3.25	NO HRDOW
L0000951	0	0.17240E-05	465499.3	3810290.5	1052.6	3.49	4.00	3.25	NO HRDOW
L0000952	0	0.17240E-05	465504.0	3810297.7	1052.3	3.49	4.00	3.25	NO HRDOW
L0000953	0	0.17240E-05	465508.6	3810304.9	1052.1	3.49	4.00	3.25	NO HRDOW
L0000954	0	0.17240E-05	465513.3	3810312.1	1052.0	3.49	4.00	3.25	NO HRDOW
L0000955	0	0.17240E-05	465518.0	3810319.3	1052.0	3.49	4.00	3.25	NO HRDOW
L0000956	0	0.17240E-05	465522.6	3810326.6	1052.0	3.49	4.00	3.25	NO HRDOW
L0000957	0	0.17240E-05	465527.2	3810333.8	1051.9	3.49	4.00	3.25	NO HRDOW
L0000958	0	0.17240E-05	465531.8	3810341.1	1051.7	3.49	4.00	3.25	NO HRDOW
L0000959	0	0.17240E-05	465536.4	3810348.3	1051.4	3.49	4.00	3.25	NO HRDOW
L0000960	0	0.17240E-05	465541.0	3810355.6	1051.0	3.49	4.00	3.25	NO HRDOW
L0000961	0	0.17240E-05	465545.6	3810362.8	1050.6	3.49	4.00	3.25	NO HRDOW

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 NO    HRDOW
 L0000967         0   0.17240E-05  465573.3 3810406.3  1049.2     3.49     4.00     3.25
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 L0000968         0   0.17240E-05  465577.9 3810413.6  1048.8     3.49     4.00     3.25
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 NO    HRDOW
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 NO    HRDOW
 L0000975         0   0.17240E-05  465610.4 3810464.1  1048.0     3.49     4.00     3.25
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
   SOURCE      PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
   SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)             BY
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 - - - - - - - - - - - - -

 L0000976         0   0.17240E-05  465615.2 3810471.3  1048.0     3.49     4.00     3.25
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 NO    HRDOW
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 L0000980         0   0.17240E-05  465634.4 3810499.8  1048.0     3.49     4.00     3.25
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 NO    HRDOW
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 NO    HRDOW
 L0000989         0   0.17240E-05  465677.5 3810563.9  1046.7     3.49     4.00     3.25
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 L0000990         0   0.17240E-05  465682.3 3810571.0  1046.5     3.49     4.00     3.25
 NO    HRDOW
 L0000991         0   0.17240E-05  465687.1 3810578.2  1046.3     3.49     4.00     3.25
 NO    HRDOW
 L0000992         0   0.17240E-05  465691.8 3810585.4  1046.0     3.49     4.00     3.25
 NO    HRDOW
 L0000993         0   0.17240E-05  465696.3 3810592.7  1046.0     3.49     4.00     3.25
 NO    HRDOW
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 NO    HRDOW
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 NO    HRDOW
 L0001001         0   0.17240E-05  465680.0 3810620.5  1045.9     3.49     4.00     3.25
 NO    HRDOW
 L0001002         0   0.17240E-05  465672.7 3810616.1  1046.0     3.49     4.00     3.25
 NO    HRDOW
 L0001003         0   0.17240E-05  465665.4 3810611.6  1046.0     3.49     4.00     3.25
 NO    HRDOW
 L0001004         0   0.17240E-05  465658.0 3810607.1  1046.1     3.49     4.00     3.25
 NO    HRDOW
 L0001005         0   0.17240E-05  465650.7 3810602.7  1046.3     3.49     4.00     3.25
 NO    HRDOW
 L0001006         0   0.17240E-05  465643.3 3810598.2  1046.5     3.49     4.00     3.25
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 L0001008         0   0.17240E-05  465628.7 3810589.2  1046.9     3.49     4.00     3.25
 NO    HRDOW
 L0001009         0   0.17240E-05  465621.3 3810584.8  1047.0     3.49     4.00     3.25
 NO    HRDOW
 L0001010         0   0.17240E-05  465614.0 3810580.3  1047.2     3.49     4.00     3.25
 NO    HRDOW
 L0001011         0   0.17240E-05  465606.7 3810575.8  1047.3     3.49     4.00     3.25
 NO    HRDOW
 L0001012         0   0.17240E-05  465599.3 3810571.4  1047.5     3.49     4.00     3.25
 NO    HRDOW
 L0001013         0   0.17240E-05  465591.3 3810568.3  1047.6     3.49     4.00     3.25
 NO    HRDOW
 L0001014         0   0.17240E-05  465583.2 3810565.6  1047.7     3.49     4.00     3.25
 NO    HRDOW
 L0001015         0   0.17240E-05  465575.0 3810563.0  1047.8     3.49     4.00     3.25
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	SCALAR VARY BY
L0001016	0	0.17240E-05	465566.9	3810560.3	1047.9	3.49	4.00	3.25	NO HRDOW
L0001017	0	0.17240E-05	465558.7	3810557.6	1048.0	3.49	4.00	3.25	NO HRDOW
L0001018	0	0.17240E-05	465550.5	3810554.9	1048.0	3.49	4.00	3.25	NO HRDOW
L0001019	0	0.17240E-05	465542.4	3810552.2	1048.1	3.49	4.00	3.25	NO HRDOW
L0001020	0	0.17240E-05	465534.2	3810549.5	1048.2	3.49	4.00	3.25	NO HRDOW
L0001021	0	0.17240E-05	465526.1	3810546.8	1048.3	3.49	4.00	3.25	NO HRDOW
L0001022	0	0.17240E-05	465517.6	3810545.4	1048.4	3.49	4.00	3.25	NO HRDOW
L0001023	0	0.17240E-05	465509.1	3810544.5	1048.4	3.49	4.00	3.25	NO HRDOW
L0001024	0	0.17240E-05	465500.6	3810543.7	1048.4	3.49	4.00	3.25	NO HRDOW
L0001025	0	0.17240E-05	465492.0	3810542.7	1048.5	3.49	4.00	3.25	NO HRDOW
L0001026	0	0.17240E-05	465483.5	3810541.7	1048.5	3.49	4.00	3.25	NO HRDOW
L0001027	0	0.17240E-05	465475.0	3810540.7	1048.5	3.49	4.00	3.25	NO HRDOW
L0001028	0	0.17240E-05	465466.4	3810539.7	1049.0	3.49	4.00	3.25	NO HRDOW
L0001029	0	0.17240E-05	465457.8	3810539.7	1049.0	3.49	4.00	3.25	NO HRDOW
L0001030	0	0.17240E-05	465449.2	3810539.6	1049.2	3.49	4.00	3.25	NO HRDOW
L0001031	0	0.17240E-05	465440.6	3810539.6	1049.3	3.49	4.00	3.25	NO HRDOW
L0001032	0	0.17240E-05	465432.1	3810539.6	1049.5	3.49	4.00	3.25	NO HRDOW
L0001033	0	0.17240E-05	465423.5	3810539.5	1049.6	3.49	4.00	3.25	NO HRDOW
L0001034	0	0.17240E-05	465414.9	3810539.5	1049.8	3.49	4.00	3.25	NO HRDOW
L0001035	0	0.17240E-05	465406.3	3810539.4	1049.9	3.49	4.00	3.25	NO HRDOW
L0001036	0	0.17240E-05	465397.7	3810539.4	1050.0	3.49	4.00	3.25	NO HRDOW
L0001037	0	0.17240E-05	465389.1	3810539.4	1050.2	3.49	4.00	3.25	NO HRDOW
L0001038	0	0.17240E-05	465380.5	3810539.3	1050.4	3.49	4.00	3.25	NO HRDOW
L0001039	0	0.17240E-05	465371.9	3810539.3	1050.5	3.49	4.00	3.25	NO HRDOW
L0001040	0	0.17240E-05	465363.3	3810539.2	1050.6	3.49	4.00	3.25	NO HRDOW

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 NO    HRDOW
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 NO    HRDOW
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 NO    HRDOW
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 NO    HRDOW
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 NO    HRDOW
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 NO    HRDOW
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 L0001052         0   0.17240E-05  465260.3 3810538.7  1051.8     3.49     4.00     3.25
 NO    HRDOW
 L0001053         0   0.17240E-05  465251.7 3810538.7  1052.0     3.49     4.00     3.25
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 L0001054         0   0.17240E-05  465243.1 3810538.6  1052.0     3.49     4.00     3.25
 NO    HRDOW
 L0001055         0   0.17240E-05  465234.5 3810538.6  1052.0     3.49     4.00     3.25
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                  *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
  SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
  SOURCE  SCALAR VARY
    ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - -

 L0001056         0   0.17240E-05  465225.9 3810538.6  1052.0     3.49     4.00     3.25
 NO    HRDOW
 L0001057         0   0.17240E-05  465217.3 3810538.5  1052.0     3.49     4.00     3.25
 NO    HRDOW
 L0001058         0   0.17240E-05  465208.7 3810538.5  1052.0     3.49     4.00     3.25
 NO    HRDOW
 L0001059         0   0.17240E-05  465200.1 3810538.4  1052.0     3.49     4.00     3.25
 NO    HRDOW
 L0001060         0   0.17240E-05  465191.5 3810538.4  1052.0     3.49     4.00     3.25
 NO    HRDOW
 L0001061         0   0.17240E-05  465183.0 3810538.4  1052.2     3.49     4.00     3.25
 NO    HRDOW
 L0001062         0   0.17240E-05  465174.4 3810538.3  1052.5     3.49     4.00     3.25
 NO    HRDOW
 L0001063         0   0.17240E-05  465165.8 3810538.3  1052.8     3.49     4.00     3.25
 NO    HRDOW
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 L0001064         0   0.17240E-05  465157.2 3810538.2  1053.0     3.49     4.00     3.25
 NO    HRDOW
 L0001065         0   0.17240E-05  465148.6 3810538.2  1053.0     3.49     4.00     3.25
 NO    HRDOW
 L0001066         0   0.17240E-05  465140.0 3810538.2  1053.0     3.49     4.00     3.25
 NO    HRDOW
 L0001067         0   0.17240E-05  465131.4 3810538.2  1053.0     3.49     4.00     3.25
 NO    HRDOW
 L0001068         0   0.17240E-05  465122.8 3810538.2  1053.2     3.49     4.00     3.25
 NO    HRDOW
 L0001069         0   0.17240E-05  465114.2 3810538.2  1053.5     3.49     4.00     3.25
 NO    HRDOW
 L0001070         0   0.17240E-05  465105.6 3810538.2  1053.8     3.49     4.00     3.25
 NO    HRDOW
 L0001071         0   0.17240E-05  465097.1 3810538.2  1054.0     3.49     4.00     3.25
 NO    HRDOW
 L0001072         0   0.17240E-05  465088.5 3810538.2  1054.0     3.49     4.00     3.25
 NO    HRDOW
 L0001073         0   0.17240E-05  465079.9 3810538.2  1054.0     3.49     4.00     3.25
 NO    HRDOW
 L0001074         0   0.17240E-05  465071.3 3810538.2  1054.0     3.49     4.00     3.25
 NO    HRDOW
 L0001075         0   0.17240E-05  465062.7 3810538.2  1054.0     3.49     4.00     3.25
 NO    HRDOW
 L0001076         0   0.17240E-05  465054.1 3810538.2  1054.0     3.49     4.00     3.25
 NO    HRDOW
 L0001077         0   0.17240E-05  465045.5 3810538.2  1054.0     3.49     4.00     3.25
 NO    HRDOW
 L0001078         0   0.17240E-05  465036.9 3810538.2  1054.1     3.49     4.00     3.25
 NO    HRDOW
 L0001079         0   0.17240E-05  465028.3 3810537.8  1054.4     3.49     4.00     3.25
 NO    HRDOW
 L0001080         0   0.17240E-05  465019.8 3810537.3  1054.7     3.49     4.00     3.25
 NO    HRDOW
 L0001081         0   0.17240E-05  465011.2 3810536.8  1055.0     3.49     4.00     3.25
 NO    HRDOW
 L0001082         0   0.17240E-05  465002.6 3810536.3  1055.2     3.49     4.00     3.25
 NO    HRDOW
 L0001083         0   0.17240E-05  464994.0 3810535.8  1055.4     3.49     4.00     3.25
 NO    HRDOW
 L0001084         0   0.17240E-05  464985.5 3810535.4  1055.6     3.49     4.00     3.25
 NO    HRDOW
 L0001085         0   0.17240E-05  464976.9 3810534.9  1055.7     3.49     4.00     3.25
 NO    HRDOW
 L0001086         0   0.17240E-05  464968.4 3810533.8  1055.8     3.49     4.00     3.25
 NO    HRDOW
 L0001087         0   0.17240E-05  464960.0 3810532.2  1055.9     3.49     4.00     3.25
 NO    HRDOW
 L0001088         0   0.17240E-05  464951.5 3810530.5  1056.0     3.49     4.00     3.25
 NO    HRDOW
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       11:12:53

                     PAGE  10
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                          SOURCE IDs
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  ALL        L0001190    , L0001191    , L0001192    , L0001193    , L0001194    , L0001195    ,
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 L0001196    , L0001197    ,

            L0001198    , L0001199    , L0001200    , L0001201    , L0001202    , L0001203    ,
            L0001204    , L0001205    ,

            L0001206    , L0001207    , L0001208    , L0001209    , L0001210    , L0001211    ,
            L0001212    , L0001213    ,

            L0001214    , L0001215    , L0001216    , L0001217    , L0001218    , L0001219    ,
            L0001220    , L0001221    ,

            L0001222    , L0001223    , L0001224    , L0001225    , L0001226    , L0001227    ,
            L0001228    , L0001229    ,

            L0001230    , L0001231    , L0001232    , L0001233    , L0001234    , L0001235    ,
            L0001236    , L0001237    ,

            L0001238    , L0001239    , L0001240    , L0001241    , L0001242    , L0001243    ,
            L0001244    , L0001245    ,

            L0001246    , L0001247    , L0001248    , L0001249    , L0001250    , L0001251    ,
            L0001252    , L0001253    ,

            L0001254    , L0001255    , VOL1        , VOL2        , VOL3        , VOL4        ,
            VOL5        , VOL6        ,

            VOL7        , VOL8        , VOL9        , VOL10       , VOL11       , VOL12       ,
            VOL13       , VOL14       ,

            VOL15       , VOL16       , L0000858    , L0000859    , L0000860    , L0000861    ,
            L0000862    , L0000863    ,

            L0000864    , L0000865    , L0000866    , L0000867    , L0000868    , L0000869    ,
            L0000870    , L0000871    ,

            L0000872    , L0000873    , L0000874    , L0000875    , L0000876    , L0000877    ,
            L0000878    , L0000879    ,

            L0000880    , L0000881    , L0000882    , L0000883    , L0000884    , L0000885    ,
            L0000886    , L0000887    ,

            L0000888    , L0000889    , L0000890    , L0000891    , L0000892    , L0000893    ,
            L0000894    , L0000895    ,

            L0000896    , L0000897    , L0000898    , L0000899    , L0000900    , L0000901    ,
            L0000902    , L0000903    ,

            L0000904    , L0000905    , L0000906    , L0000907    , L0000908    , L0000909    ,
            L0000910    , L0000911    ,

            L0000912    , L0000913    , L0000914    , L0000915    , L0000916    , L0000917    ,
            L0000918    , L0000919    ,

            L0000920    , L0000921    , L0000922    , L0000923    , L0000924    , L0000925    ,
            L0000926    , L0000927    ,

            L0000928    , L0000929    , L0000930    , L0000931    , L0000932    , L0000933    ,
            L0000934    , L0000935    ,
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                     PAGE  11
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*
```

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
	L0000936 , L0000937 , L0000938 , L0000939 , L0000940 , L0000941 , L0000942 , L0000943 ,
	L0000944 , L0000945 , L0000946 , L0000947 , L0000948 , L0000949 , L0000950 , L0000951 ,
	L0000952 , L0000953 , L0000954 , L0000955 , L0000956 , L0000957 , L0000958 , L0000959 ,
	L0000960 , L0000961 , L0000962 , L0000963 , L0000964 , L0000965 , L0000966 , L0000967 ,
	L0000968 , L0000969 , L0000970 , L0000971 , L0000972 , L0000973 , L0000974 , L0000975 ,
	L0000976 , L0000977 , L0000978 , L0000979 , L0000980 , L0000981 , L0000982 , L0000983 ,
	L0000984 , L0000985 , L0000986 , L0000987 , L0000988 , L0000989 , L0000990 , L0000991 ,
	L0000992 , L0000993 , L0000994 , L0000995 , L0000996 , L0000997 , L0000998 , L0000999 ,
	L0001000 , L0001001 , L0001002 , L0001003 , L0001004 , L0001005 , L0001006 , L0001007 ,
	L0001008 , L0001009 , L0001010 , L0001011 , L0001012 , L0001013 , L0001014 , L0001015 ,
	L0001016 , L0001017 , L0001018 , L0001019 , L0001020 , L0001021 , L0001022 , L0001023 ,
	L0001024 , L0001025 , L0001026 , L0001027 , L0001028 , L0001029 , L0001030 , L0001031 ,
	L0001032 , L0001033 , L0001034 , L0001035 , L0001036 , L0001037 , L0001038 , L0001039 ,
	L0001040 , L0001041 , L0001042 , L0001043 , L0001044 , L0001045 , L0001046 , L0001047 ,
	L0001048 , L0001049 , L0001050 , L0001051 , L0001052 , L0001053 , L0001054 , L0001055 ,
	L0001056 , L0001057 , L0001058 , L0001059 , L0001060 , L0001061 , L0001062 , L0001063 ,
	L0001064 , L0001065 , L0001066 , L0001067 , L0001068 , L0001069 , L0001070 , L0001071 ,
	L0001072 , L0001073 , L0001074 , L0001075 , L0001076 , L0001077 , L0001078 , L0001079 ,
	L0001080 , L0001081 , L0001082 , L0001083 , L0001084 , L0001085 , L0001086 , L0001087 ,
	L0001088 ,

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001190 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001191 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001192 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001193 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001194 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001195 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001197 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001198 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001199   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001201 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001203     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
```

```
 SOURCE ID = L0001204     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001205     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001206 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001207 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001208 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001210 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001211 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001212 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

SOURCE ID = L0001213 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001215 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001216 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22													

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001217 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001218 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01				

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001219 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001222 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001223 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = L0001224 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001226     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001227     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001228 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

SOURCE ID = L0001229 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                  (HRDOW) *

SOURCE ID = L0001231   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
** *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001233     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
** *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001234     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
```

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001235 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001237     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001238 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001239 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001240 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001241 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001242     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001243     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001244 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001246     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001247 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001248 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001249 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001250 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

```
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001251     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001252     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001253 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

(HRDOW) *

SOURCE ID = L0001254 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL1 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL2 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL3 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL4 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL5 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
- - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22

*** AERMET - VERSION 19191 ***

*** *** 11:12:53

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL9 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL10 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL11 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00

```
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = VOL12        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = VOL13        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
```

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = VOL14        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
```

```
 SOURCE ID = VOL15        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = VOL16        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000858 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000859 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000860 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000862 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000864 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000865 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000866 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000867 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000868 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22													

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000869 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000870 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01				

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000871 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000872 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR

SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000874 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000875 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = L0000876 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000878     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                     PAGE 115
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000879     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000880 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

SOURCE ID = L0000881 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000882 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                  (HRDOW) *

SOURCE ID = L0000883   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000885 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000886 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000887 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000889     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000890 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000891 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000892 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000893 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22

*** AERMET - VERSION 19191 ***

*** *** 11:12:53

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000894 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000896 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000898     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000899 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000900 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                      PAGE 137
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000901     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000902     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000903 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                    PAGE 141
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000905     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                    PAGE 142
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
```

(HRDOW) *

SOURCE ID = L0000906 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000908 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000909 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000910 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000912 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000913 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000915 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000916 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000917 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000918 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000919 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000920 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000921     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
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```
 SOURCE ID = L0000922     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000923     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000924 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000925 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000926 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                     PAGE 164
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000928     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

                     PAGE 165
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000929     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
```

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000930 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000931 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000932 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000933 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000934 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22													

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000935 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000936 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01				

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000937 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000940 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000941 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = L0000942 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000944     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000945     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000946 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

SOURCE ID = L0000947 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000948 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                  (HRDOW) *

SOURCE ID = L0000949   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000951 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000953 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

- - - - - - - - - - - - - - - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000955 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - - - - - - - - - - - - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000956 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000957 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000958 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000959 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000960 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000961 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000962 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

                    PAGE 200
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000964     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000965 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000966 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00												

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = L0000967 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000969 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000971 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

(HRDOW) *

SOURCE ID = L0000972 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000974 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000975 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000976 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000978 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000979 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000981 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000982 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000983   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000985 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000987     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
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```
 SOURCE ID = L0000988     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0000989     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000990 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000991 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000992 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000994 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000996 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000997 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22

*** AERMET - VERSION 19191 ***

*** *** 11:12:53

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000998 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = WEEKDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0000999 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001000 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22													

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001001 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001002 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01				

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001003 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001004 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001006 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001007 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = L0001008 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001010     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001011     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001012 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 SOURCE ID = L0001013     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001014     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001015   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001017 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001018 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001019 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

- - - - - - - - - - - - - - - - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001021 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - - - - - - - - - - - - - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001022 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001023 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001024 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001025 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001026     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001027     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
```

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001028 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001030     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
  .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001031 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001032 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001033 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001034 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001035 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001037     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
   .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
   .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
   .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
```

(HRDOW) *

SOURCE ID = L0001038 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001040 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001041 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001042 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001043 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001044 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

- - - -

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001047 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001048 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00										

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001049 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001050 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001051 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001053     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *
```

```
 SOURCE ID = L0001054     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001055     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001056 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22

*** AERMET - VERSION 19191 ***

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001057 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			

```
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001058     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001059     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001060 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001062 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

- - - -

SOURCE ID = L0001063 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001064 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001065 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SUNDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001066 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								
DAY OF WEEK = SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22													

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001067 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001068 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01				

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001069 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001072 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001073 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = L0001074 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001076     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                          DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001077     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - -
                                          DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
```

.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001078 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

SOURCE ID = L0001079 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001080 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                  (HRDOW) *

SOURCE ID = L0001081   ; SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
 SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - -

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001083 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
- - - -

DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = L0001085 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
- - - -

```
 - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01   14
    .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00    6
    .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00   14
    .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00   22
   .0000E+00   23  .0000E+00   24  .0000E+00
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                          ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
                   (HRDOW) *

 SOURCE ID = L0001087     ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR
  SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - -
```

SOURCE ID = L0001088 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01
15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00
8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00
15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00
22	.0000E+00	23	.0000E+00	24	.0000E+00								

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(464506.9, 3810141.6, 1063.0, 1063.0, 0.0); (465481.2, 3810503.5, 1049.8, 1049.8, 0.0);
(465406.4, 3810503.0, 1050.6, 1050.6, 0.0); (465212.7, 3810456.2, 1053.0, 1053.0, 0.0);
(464952.4, 3810455.7, 1056.0, 1056.0, 0.0); (465964.7, 3810432.9, 1048.0, 1048.0, 0.0);
(465963.2, 3810384.6, 1048.2, 1048.2, 0.0); (465974.5, 3810476.1, 1047.0, 1047.0, 0.0);
(466001.9, 3810516.5, 1046.0, 1046.0, 0.0); (466028.4, 3810558.2, 1044.9, 1044.9, 0.0);
(466054.6, 3810598.8, 1044.0, 1044.0, 0.0); (466136.4, 3810670.0, 1042.0, 1042.0, 0.0);
(466136.4, 3810635.9, 1042.1, 1042.1, 0.0); (466074.3, 3810786.8, 1040.2, 1040.2, 0.0);
(465468.5, 3810751.9, 1045.5, 1045.5, 0.0); (465266.0, 3810753.5, 1049.2, 1049.2, 0.0);
(465112.4, 3810808.1, 1050.6, 1050.6, 0.0); (465314.5, 3810854.3, 1047.0, 1047.0, 0.0);
(465221.8, 3810854.6, 1048.9, 1048.9, 0.0); (463382.5, 3811176.2, 1061.1, 1061.1, 0.0);
(463250.8, 3811177.8, 1062.2, 1062.2, 0.0); (463278.3, 3810876.7, 1065.2, 1065.2, 0.0);
(465601.6, 3810943.3, 1041.0, 1041.0, 0.0); (464507.2, 3809995.0, 1066.5, 1066.5, 0.0);

```
    ( 464508.1, 3809810.8,    1068.8,    1068.8,       0.0);         ( 464509.8, 3809672.1,
    1070.3,    1070.3,       0.0);
    ( 464700.5, 3809701.5,    1068.0,    1068.0,       0.0);         ( 464701.3, 3809618.0,
    1069.3,    1069.3,       0.0);
    ( 464755.4, 3809565.3,    1069.5,    1069.5,       0.0);         ( 465246.9, 3809566.2,
    1067.0,    1067.0,       0.0);
    ( 464785.6, 3809489.1,    1070.3,    1070.3,       0.0);         ( 464694.0, 3809505.2,
    1071.0,    1071.0,       0.0);
    ( 464989.3, 3810696.8,    1054.0,    1054.0,       0.0);         ( 467840.7, 3810027.9,
    1029.9,    1029.9,       0.0);
    ( 467774.0, 3809972.0,    1031.9,    1031.9,       0.0);         ( 467765.1, 3810268.7,
    1027.6,    1027.6,       0.0);
    ( 467360.5, 3810321.9,    1033.9,    1033.9,       0.0);         ( 467361.2, 3810282.3,
    1034.7,    1034.7,       0.0);
    ( 467962.7, 3811258.2,    1013.3,    1013.3,
    0.0);
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                    (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

              NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS
              INCLUDED IN THE DATA FILE.



                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES
                                  ***
                                                      (METERS/SEC)

                                                1.54,   3.09,   5.14,   8.23,  10.80,
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       11:12:53

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                      *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

   Surface file:
   KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC                          Met
   Version:  19191
```

Profile file:
KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
Surface format:
FREE

Profile format:
FREE

Surface station no.: 23161 Upper air station no.: 3120
Name: DAGGETT/FAA_AIRPORT Name:
UNKNOWN
Year: 2015 Year: 2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-24.9	0.256	-9.000	-9.000	-999.	311.	72.1	0.02	4.18	1.00	4.27	251.	10.0	272.5	2.0
15	01	01	1	02	-24.3	0.250	-9.000	-9.000	-999.	300.	68.6	0.02	4.18	1.00	4.17	240.	10.0	272.5	2.0
15	01	01	1	03	-28.4	0.292	-9.000	-9.000	-999.	379.	94.0	0.02	4.18	1.00	4.85	255.	10.0	273.1	2.0
15	01	01	1	04	-26.1	0.266	-9.000	-9.000	-999.	329.	77.8	0.02	4.18	1.00	4.51	274.	10.0	270.4	2.0
15	01	01	1	05	-32.2	0.328	-9.000	-9.000	-999.	450.	118.0	0.02	4.18	1.00	5.51	275.	10.0	270.4	2.0
15	01	01	1	06	-34.9	0.355	-9.000	-9.000	-999.	507.	138.4	0.02	4.18	1.00	5.84	252.	10.0	270.4	2.0
15	01	01	1	07	-34.8	0.355	-9.000	-9.000	-999.	508.	138.9	0.02	4.18	1.00	5.85	251.	10.0	271.4	2.0
15	01	01	1	08	-19.3	0.250	-9.000	-9.000	-999.	306.	68.6	0.02	4.18	0.57	4.15	266.	10.0	270.9	2.0
15	01	01	1	09	31.4	0.236	0.499	0.005	134.	276.	-35.7	0.02	4.18	0.36	3.40	255.	10.0	273.1	2.0
15	01	01	1	10	103.0	0.183	1.101	0.005	441.	188.	-5.0	0.02	4.18	0.29	2.15	300.	10.0	277.0	2.0
15	01	01	1	11	152.0	0.131	1.445	0.005	675.	114.	-1.3	0.04	4.18	0.26	1.08	230.	10.0	278.8	2.0
15	01	01	1	12	175.1	0.131	2.058	0.006	1692.	114.	-1.1	0.02	4.18	0.25	1.31	109.	10.0	280.4	2.0
15	01	01	1	13	171.2	0.143	2.108	0.011	1860.	130.	-1.4	0.01	4.18	0.26	1.55	35.	10.0	281.4	2.0
15	01	01	1	14	140.5	0.177	1.982	0.011	1882.	179.	-3.4	0.01	4.18	0.27	2.16	55.	10.0	282.0	2.0
15	01	01	1	15	84.4	0.150	1.677	0.011	1895.	139.	-3.4	0.02	4.18	0.30	1.77	64.	10.0	282.5	2.0
15	01	01	1	16	8.8	0.148	0.789	0.010	1896.	136.	-31.1	0.02	4.18	0.40	2.15	70.	10.0	282.5	2.0
15	01	01	1	17	-7.9	0.117	-9.000	-9.000	-999.	96.	17.3	0.02	4.18	0.70	2.08	75.	10.0	279.9	2.0
15	01	01	1	18	-3.9	0.085	-9.000	-9.000	-999.	60.	13.5	0.05	4.18	1.00	1.24	196.	10.0	277.0	2.0
15	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.03	4.18	1.00	0.00	0.	10.0	274.9	2.0
15	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.03	4.18	1.00	0.00	0.	10.0	274.9	2.0
15	01	01	1	21	-10.8	0.137	-9.000	-9.000	-999.	121.	20.5	0.02	4.18	1.00	2.36	260.	10.0	274.2	2.0
15	01	01	1	22	-19.5	0.199	-9.000	-9.000	-999.	214.	43.7	0.02	4.18	1.00	3.36	262.	10.0	272.0	2.0
15	01	01	1	23	-18.8	0.192	-9.000	-9.000	-999.	202.	40.5	0.04	4.18	1.00	2.86	230.	10.0	272.0	2.0
15	01	01	1	24	-28.1	0.287	-9.000	-9.000	-999.	370.	90.9	0.02	4.18	1.00	4.86	270.	10.0	272.0	2.0

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): L0001190 , L0001191 , L0001192 , L0001193 , L0001194 , L0001195 , L0001196 , L0001197 , L0001198 , L0001199 , L0001200 , L0001201 , L0001202 , L0001203 , L0001204 , L0001205 , L0001206 , L0001207 , L0001208 , L0001209 , L0001210 , L0001211 , L0001212 , L0001213 , L0001214 , L0001215 , L0001216 , L0001217 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
464506.90	3810141.57	0.00106	465481.17	3810503.53	0.02976
465406.43	3810503.02	0.03114	465212.73	3810456.25	0.01575
464952.43	3810455.74	0.01012	465964.71	3810432.92	0.00509
465963.18	3810384.60	0.00415	465974.54	3810476.13	0.00591
466001.90	3810516.53	0.00620	466028.40	3810558.19	0.00615
466054.63	3810598.78	0.00569	466136.44	3810669.97	0.00381
466136.44	3810635.94	0.00406	466074.30	3810786.75	0.00314
465468.45	3810751.95	0.02343	465265.95	3810753.49	0.02128
465112.36	3810808.15	0.00718	465314.53	3810854.32	0.00550
465221.79	3810854.63	0.00505	463382.51	3811176.23	0.00015
463250.80	3811177.76	0.00014	463278.26	3810876.71	0.00017
465601.63	3810943.28	0.00264	464507.22	3809995.00	0.00077
464508.08	3809810.84	0.00062	464509.81	3809672.08	0.00060
464700.45	3809701.47	0.00236	464701.32	3809618.04	0.00229
464755.36	3809565.30	0.00415	465246.88	3809566.17	0.00112
464785.59	3809489.06	0.00193	464694.05		

3809505.22 0.00149
464989.27 3810696.82 0.02212 467840.66
3810027.92 0.00034
467774.00 3809972.05 0.00034 467765.08
3810268.74 0.00036
467360.52 3810321.90 0.00052 467361.23
3810282.35 0.00052
467962.68 3811258.22
0.00016

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

GROUP ID	NETWORK	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.03114	(465406.43, 3810503.02, 1050.60, 1050.60, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.02976	(465481.17, 3810503.53, 1049.76, 1049.76, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.02343	(465468.45, 3810751.95, 1045.47, 1045.47, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.02212	(464989.27, 3810696.82, 1054.00, 1054.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.02128	(465265.95, 3810753.49, 1049.19, 1049.19, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.01575	(465212.73, 3810456.25, 1053.00, 1053.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.01012	(464952.43, 3810455.74, 1056.00, 1056.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.00718	(465112.36, 3810808.15, 1050.59, 1050.59, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.00620	(466001.90, 3810516.53, 1045.95, 1045.95, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.00615	(466028.40, 3810558.19, 1044.94, 1044.94, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

FF *** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 *** 09/19/22
*** AERMET - VERSION 19191 ***
*** *** 11:12:53

PAGE 330
*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   4 Warning Message(s)
A Total of   637 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   191 Calm Hours Identified

A Total of   446 Missing Hours Identified (1.02 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   4563   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   4563   MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450   17545   CHKDAT: Record Out of Sequence in Meteorological File at: 18010101
MX W450   17545   CHKDAT: Record Out of Sequence in Meteorological File at: 1 year gap

   ****
   *** AERMOD Finishes Successfully ***
   ****

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.0.0
** Lakes Environmental Software Inc.
** Date: 9/19/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 Ops\14848 Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14848 Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001462
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 465137.392, 3810605.322, 1052.85, 3.49, 4.00
** 465480.977, 3810605.322, 1047.94, 3.49, 4.00
** ------------------------------------------------------------------------
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   LOCATION L0000522     VOLUME   465150.277 3810605.322 1052.32
   LOCATION L0000523     VOLUME   465158.867 3810605.322 1052.04
   LOCATION L0000524     VOLUME   465167.457 3810605.322 1052.00
   LOCATION L0000525     VOLUME   465176.047 3810605.322 1052.00
   LOCATION L0000526     VOLUME   465184.637 3810605.322 1052.00
   LOCATION L0000527     VOLUME   465193.227 3810605.322 1051.93
   LOCATION L0000528     VOLUME   465201.817 3810605.322 1051.75
   LOCATION L0000529     VOLUME   465210.407 3810605.322 1051.56
   LOCATION L0000530     VOLUME   465218.997 3810605.322 1051.38
   LOCATION L0000531     VOLUME   465227.587 3810605.322 1051.26
   LOCATION L0000532     VOLUME   465236.177 3810605.322 1051.16
   LOCATION L0000533     VOLUME   465244.767 3810605.322 1051.06
   LOCATION L0000534     VOLUME   465253.357 3810605.322 1050.93
   LOCATION L0000535     VOLUME   465261.947 3810605.322 1050.74
   LOCATION L0000536     VOLUME   465270.537 3810605.322 1050.56
   LOCATION L0000537     VOLUME   465279.127 3810605.322 1050.37
   LOCATION L0000538     VOLUME   465287.717 3810605.322 1050.26
```

```
   LOCATION L0000539     VOLUME   465296.307 3810605.322 1050.16
   LOCATION L0000540     VOLUME   465304.897 3810605.322 1050.06
   LOCATION L0000541     VOLUME   465313.487 3810605.322 1050.00
   LOCATION L0000542     VOLUME   465322.077 3810605.322 1050.00
   LOCATION L0000543     VOLUME   465330.667 3810605.322 1050.00
   LOCATION L0000544     VOLUME   465339.257 3810605.322 1050.00
   LOCATION L0000545     VOLUME   465347.847 3810605.322 1049.83
   LOCATION L0000546     VOLUME   465356.437 3810605.322 1049.65
   LOCATION L0000547     VOLUME   465365.027 3810605.322 1049.46
   LOCATION L0000548     VOLUME   465373.617 3810605.322 1049.31
   LOCATION L0000549     VOLUME   465382.207 3810605.322 1049.21
   LOCATION L0000550     VOLUME   465390.797 3810605.322 1049.11
   LOCATION L0000551     VOLUME   465399.387 3810605.322 1049.01
   LOCATION L0000552     VOLUME   465407.977 3810605.322 1048.83
   LOCATION L0000553     VOLUME   465416.567 3810605.322 1048.64
   LOCATION L0000554     VOLUME   465425.157 3810605.322 1048.46
   LOCATION L0000555     VOLUME   465433.747 3810605.322 1048.31
   LOCATION L0000556     VOLUME   465442.337 3810605.322 1048.21
   LOCATION L0000557     VOLUME   465450.927 3810605.322 1048.11
   LOCATION L0000558     VOLUME   465459.517 3810605.322 1048.01
   LOCATION L0000559     VOLUME   465468.107 3810605.322 1048.00
   LOCATION L0000560     VOLUME   465476.697 3810605.322 1048.00
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Palmetto 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 5.032E-08
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 464947.412, 3810532.648, 1056.00, 3.49, 4.00
** 465005.361, 3810539.256, 1055.06, 3.49, 4.00
** 465073.985, 3810540.781, 1054.00, 3.49, 4.00
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   LOCATION L0000561     VOLUME   464951.679 3810533.135 1055.99
   LOCATION L0000562     VOLUME   464960.214 3810534.108 1055.91
   LOCATION L0000563     VOLUME   464968.749 3810535.081 1055.81
   LOCATION L0000564     VOLUME   464977.283 3810536.054 1055.69
   LOCATION L0000565     VOLUME   464985.818 3810537.028 1055.51
   LOCATION L0000566     VOLUME   464994.353 3810538.001 1055.31
   LOCATION L0000567     VOLUME   465002.888 3810538.974 1055.13
   LOCATION L0000568     VOLUME   465011.460 3810539.392 1054.95
   LOCATION L0000569     VOLUME   465020.048 3810539.583 1054.66
   LOCATION L0000570     VOLUME   465028.636 3810539.773 1054.38
   LOCATION L0000571     VOLUME   465037.224 3810539.964 1054.09
   LOCATION L0000572     VOLUME   465045.812 3810540.155 1054.00
   LOCATION L0000573     VOLUME   465054.399 3810540.346 1054.00
   LOCATION L0000574     VOLUME   465062.987 3810540.537 1054.00
   LOCATION L0000575     VOLUME   465071.575 3810540.728 1054.00
** End of LINE VOLUME Source ID = SLINE3
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Palmetto 25%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.179E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
** 465074.273, 3810540.960, 1054.00, 3.49, 4.00
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** 465393.632, 3810538.463, 1050.25, 3.49, 4.00
** 465476.048, 3810539.087, 1049.15, 3.49, 4.00
** 465526.621, 3810547.516, 1048.15, 3.49, 4.00
** 465584.062, 3810564.374, 1048.05, 3.49, 4.00
** 465625.582, 3810584.665, 1047.09, 3.49, 4.00
** 465655.863, 3810603.708, 1046.23, 3.49, 4.00
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   LOCATION L0000577     VOLUME   465087.157 3810540.859 1054.00
   LOCATION L0000578     VOLUME   465095.747 3810540.792 1054.00
   LOCATION L0000579     VOLUME   465104.337 3810540.725 1053.85
   LOCATION L0000580     VOLUME   465112.927 3810540.658 1053.57
   LOCATION L0000581     VOLUME   465121.516 3810540.591 1053.28
   LOCATION L0000582     VOLUME   465130.106 3810540.524 1053.00
   LOCATION L0000583     VOLUME   465138.696 3810540.456 1053.00
   LOCATION L0000584     VOLUME   465147.286 3810540.389 1053.00
   LOCATION L0000585     VOLUME   465155.875 3810540.322 1053.00
   LOCATION L0000586     VOLUME   465164.465 3810540.255 1052.85
   LOCATION L0000587     VOLUME   465173.055 3810540.188 1052.56
   LOCATION L0000588     VOLUME   465181.645 3810540.121 1052.28
   LOCATION L0000589     VOLUME   465190.234 3810540.053 1052.00
   LOCATION L0000590     VOLUME   465198.824 3810539.986 1052.00
   LOCATION L0000591     VOLUME   465207.414 3810539.919 1052.00
   LOCATION L0000592     VOLUME   465216.003 3810539.852 1052.00
   LOCATION L0000593     VOLUME   465224.593 3810539.785 1052.00
   LOCATION L0000594     VOLUME   465233.183 3810539.717 1052.00
   LOCATION L0000595     VOLUME   465241.773 3810539.650 1052.00
   LOCATION L0000596     VOLUME   465250.362 3810539.583 1051.99
   LOCATION L0000597     VOLUME   465258.952 3810539.516 1051.86
   LOCATION L0000598     VOLUME   465267.542 3810539.449 1051.74
   LOCATION L0000599     VOLUME   465276.132 3810539.382 1051.61
   LOCATION L0000600     VOLUME   465284.721 3810539.314 1051.47
   LOCATION L0000601     VOLUME   465293.311 3810539.247 1051.31
   LOCATION L0000602     VOLUME   465301.901 3810539.180 1051.15
   LOCATION L0000603     VOLUME   465310.491 3810539.113 1050.99
   LOCATION L0000604     VOLUME   465319.080 3810539.046 1050.87
   LOCATION L0000605     VOLUME   465327.670 3810538.979 1050.74
   LOCATION L0000606     VOLUME   465336.260 3810538.911 1050.62
   LOCATION L0000607     VOLUME   465344.850 3810538.844 1050.57
   LOCATION L0000608     VOLUME   465353.439 3810538.777 1050.57
   LOCATION L0000609     VOLUME   465362.029 3810538.710 1050.57
   LOCATION L0000610     VOLUME   465370.619 3810538.643 1050.56
   LOCATION L0000611     VOLUME   465379.208 3810538.576 1050.40
   LOCATION L0000612     VOLUME   465387.798 3810538.508 1050.24
   LOCATION L0000613     VOLUME   465396.388 3810538.484 1050.07
   LOCATION L0000614     VOLUME   465404.978 3810538.549 1049.93
   LOCATION L0000615     VOLUME   465413.567 3810538.614 1049.81
   LOCATION L0000616     VOLUME   465422.157 3810538.679 1049.69
   LOCATION L0000617     VOLUME   465430.747 3810538.744 1049.56
   LOCATION L0000618     VOLUME   465439.337 3810538.809 1049.39
   LOCATION L0000619     VOLUME   465447.926 3810538.874 1049.23
   LOCATION L0000620     VOLUME   465456.516 3810538.939 1049.07
   LOCATION L0000621     VOLUME   465465.106 3810539.004 1049.00
   LOCATION L0000622     VOLUME   465473.696 3810539.069 1048.57
   LOCATION L0000623     VOLUME   465482.201 3810540.113 1048.54
   LOCATION L0000624     VOLUME   465490.674 3810541.525 1048.49
   LOCATION L0000625     VOLUME   465499.147 3810542.937 1048.44
   LOCATION L0000626     VOLUME   465507.620 3810544.349 1048.39
   LOCATION L0000627     VOLUME   465516.093 3810545.761 1048.35
   LOCATION L0000628     VOLUME   465524.566 3810547.174 1048.30
   LOCATION L0000629     VOLUME   465532.865 3810549.348 1048.23
   LOCATION L0000630     VOLUME   465541.107 3810551.767 1048.15
   LOCATION L0000631     VOLUME   465549.350 3810554.186 1048.07
   LOCATION L0000632     VOLUME   465557.592 3810556.605 1048.00
   LOCATION L0000633     VOLUME   465565.834 3810559.024 1047.95
   LOCATION L0000634     VOLUME   465574.077 3810561.443 1047.86
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   LOCATION L0000636     VOLUME   465590.148 3810567.348 1047.63
   LOCATION L0000637     VOLUME   465597.865 3810571.120 1047.50
   LOCATION L0000638     VOLUME   465605.583 3810574.891 1047.38
   LOCATION L0000639     VOLUME   465613.300 3810578.663 1047.22
   LOCATION L0000640     VOLUME   465621.018 3810582.435 1047.08
   LOCATION L0000641     VOLUME   465628.554 3810586.534 1046.99
   LOCATION L0000642     VOLUME   465635.825 3810591.107 1046.84
   LOCATION L0000643     VOLUME   465643.097 3810595.680 1046.61
   LOCATION L0000644     VOLUME   465650.368 3810600.253 1046.34
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Amargosa 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 9.979E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 15
** 465655.863, 3810603.396, 1046.24, 3.49, 4.00
** 465689.891, 3810627.122, 1046.00, 3.49, 4.00
** 465695.510, 3810626.497, 1045.93, 3.49, 4.00
** 465710.807, 3810615.883, 1045.78, 3.49, 4.00
** 465636.508, 3810500.377, 1048.00, 3.49, 4.00
** 465492.906, 3810279.978, 1052.95, 3.49, 4.00
** 465332.757, 3810033.356, 1057.45, 3.49, 4.00
** 465230.050, 3809881.013, 1060.63, 3.49, 4.00
** 465189.155, 3809833.561, 1062.00, 3.49, 4.00
** 465169.175, 3809818.889, 1062.16, 3.49, 4.00
** 465142.016, 3809805.465, 1062.73, 3.49, 4.00
** 465116.729, 3809795.475, 1063.19, 3.49, 4.00
** 465093.004, 3809790.793, 1063.41, 3.49, 4.00
** 465023.075, 3809789.856, 1064.08, 3.49, 4.00
** 464946.904, 3809792.354, 1064.00, 3.49, 4.00
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   LOCATION L0000646     VOLUME   465666.433 3810610.766 1046.02
   LOCATION L0000647     VOLUME   465673.479 3810615.679 1046.00
   LOCATION L0000648     VOLUME   465680.525 3810620.592 1045.85
   LOCATION L0000649     VOLUME   465687.572 3810625.505 1045.69
   LOCATION L0000650     VOLUME   465695.600 3810626.435 1045.66
   LOCATION L0000651     VOLUME   465702.657 3810621.538 1045.74
   LOCATION L0000652     VOLUME   465709.714 3810616.641 1045.66
   LOCATION L0000653     VOLUME   465706.879 3810609.777 1045.82
   LOCATION L0000654     VOLUME   465702.232 3810602.553 1045.96
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   LOCATION L0000656     VOLUME   465692.938 3810588.104 1046.00
   LOCATION L0000657     VOLUME   465688.291 3810580.879 1046.18
   LOCATION L0000658     VOLUME   465683.644 3810573.655 1046.42
   LOCATION L0000659     VOLUME   465678.997 3810566.430 1046.66
   LOCATION L0000660     VOLUME   465674.350 3810559.206 1046.90
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   LOCATION L0000662     VOLUME   465665.055 3810544.757 1047.06
   LOCATION L0000663     VOLUME   465660.408 3810537.533 1047.20
   LOCATION L0000664     VOLUME   465655.761 3810530.308 1047.40
   LOCATION L0000665     VOLUME   465651.114 3810523.084 1047.66
   LOCATION L0000666     VOLUME   465646.467 3810515.859 1047.85
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   LOCATION L0000669     VOLUME   465632.490 3810494.209 1048.00
   LOCATION L0000670     VOLUME   465627.800 3810487.012 1048.00
   LOCATION L0000671     VOLUME   465623.111 3810479.815 1048.00
   LOCATION L0000672     VOLUME   465618.422 3810472.618 1048.00
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LOCATION L0000677 VOLUME 465594.975 3810436.633 1048.01
LOCATION L0000678 VOLUME 465590.286 3810429.435 1048.15
LOCATION L0000679 VOLUME 465585.596 3810422.238 1048.38
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LOCATION L0000689 VOLUME 465538.703 3810350.267 1051.23
LOCATION L0000690 VOLUME 465534.014 3810343.070 1051.58
LOCATION L0000691 VOLUME 465529.324 3810335.873 1051.79
LOCATION L0000692 VOLUME 465524.635 3810328.676 1051.93
LOCATION L0000693 VOLUME 465519.946 3810321.479 1052.00
LOCATION L0000694 VOLUME 465515.256 3810314.282 1052.01
LOCATION L0000695 VOLUME 465510.567 3810307.085 1052.09
LOCATION L0000696 VOLUME 465505.878 3810299.888 1052.25
LOCATION L0000697 VOLUME 465501.188 3810292.690 1052.49
LOCATION L0000698 VOLUME 465496.499 3810285.493 1052.78
LOCATION L0000699 VOLUME 465491.812 3810278.295 1052.95
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LOCATION L0000701 VOLUME 465482.456 3810263.886 1053.00
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LOCATION L0000703 VOLUME 465473.099 3810249.477 1053.22
LOCATION L0000704 VOLUME 465468.421 3810242.273 1053.46
LOCATION L0000705 VOLUME 465463.743 3810235.069 1053.70
LOCATION L0000706 VOLUME 465459.065 3810227.864 1053.94
LOCATION L0000707 VOLUME 465454.386 3810220.660 1054.00
LOCATION L0000708 VOLUME 465449.708 3810213.456 1054.00
LOCATION L0000709 VOLUME 465445.030 3810206.251 1054.00
LOCATION L0000710 VOLUME 465440.352 3810199.047 1054.00
LOCATION L0000711 VOLUME 465435.673 3810191.843 1054.11
LOCATION L0000712 VOLUME 465430.995 3810184.638 1054.36
LOCATION L0000713 VOLUME 465426.317 3810177.434 1054.62
LOCATION L0000714 VOLUME 465421.639 3810170.230 1054.86
LOCATION L0000715 VOLUME 465416.960 3810163.026 1055.04
LOCATION L0000716 VOLUME 465412.282 3810155.821 1055.20
LOCATION L0000717 VOLUME 465407.604 3810148.617 1055.43
LOCATION L0000718 VOLUME 465402.926 3810141.413 1055.74
LOCATION L0000719 VOLUME 465398.247 3810134.208 1056.00
LOCATION L0000720 VOLUME 465393.569 3810127.004 1056.00
LOCATION L0000721 VOLUME 465388.891 3810119.800 1056.00
LOCATION L0000722 VOLUME 465384.213 3810112.595 1056.00
LOCATION L0000723 VOLUME 465379.535 3810105.391 1056.01
LOCATION L0000724 VOLUME 465374.856 3810098.187 1056.22
LOCATION L0000725 VOLUME 465370.178 3810090.982 1056.50
LOCATION L0000726 VOLUME 465365.500 3810083.778 1056.74
LOCATION L0000727 VOLUME 465360.822 3810076.574 1056.98
LOCATION L0000728 VOLUME 465356.143 3810069.369 1057.00
LOCATION L0000729 VOLUME 465351.465 3810062.165 1057.00
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LOCATION L0000731 VOLUME 465342.109 3810047.757 1057.00
LOCATION L0000732 VOLUME 465337.430 3810040.552 1057.25
LOCATION L0000733 VOLUME 465332.752 3810033.348 1057.56
LOCATION L0000734 VOLUME 465327.950 3810026.225 1057.79
LOCATION L0000735 VOLUME 465323.148 3810019.103 1057.95
LOCATION L0000736 VOLUME 465318.346 3810011.980 1058.00
LOCATION L0000737 VOLUME 465313.544 3810004.858 1058.00
LOCATION L0000738 VOLUME 465308.743 3809997.735 1058.03

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   LOCATION L0000740     VOLUME   465299.139 3809983.490 1058.41
   LOCATION L0000741     VOLUME   465294.337 3809976.368 1058.67
   LOCATION L0000742     VOLUME   465289.535 3809969.245 1058.86
   LOCATION L0000743     VOLUME   465284.733 3809962.123 1058.97
   LOCATION L0000744     VOLUME   465279.931 3809955.000 1059.03
   LOCATION L0000745     VOLUME   465275.130 3809947.878 1059.39
   LOCATION L0000746     VOLUME   465270.328 3809940.755 1059.67
   LOCATION L0000747     VOLUME   465265.526 3809933.633 1059.87
   LOCATION L0000748     VOLUME   465260.724 3809926.510 1059.99
   LOCATION L0000749     VOLUME   465255.922 3809919.388 1060.18
   LOCATION L0000750     VOLUME   465251.120 3809912.265 1060.44
   LOCATION L0000751     VOLUME   465246.318 3809905.143 1060.61
   LOCATION L0000752     VOLUME   465241.517 3809898.020 1060.67
   LOCATION L0000753     VOLUME   465236.715 3809890.898 1060.63
   LOCATION L0000754     VOLUME   465231.913 3809883.775 1060.64
   LOCATION L0000755     VOLUME   465226.618 3809877.029 1060.71
   LOCATION L0000756     VOLUME   465221.010 3809870.523 1060.85
   LOCATION L0000757     VOLUME   465215.402 3809864.016 1061.06
   LOCATION L0000758     VOLUME   465209.794 3809857.509 1061.28
   LOCATION L0000759     VOLUME   465204.186 3809851.002 1061.50
   LOCATION L0000760     VOLUME   465198.578 3809844.495 1061.72
   LOCATION L0000761     VOLUME   465192.970 3809837.988 1061.93
   LOCATION L0000762     VOLUME   465186.942 3809831.936 1062.00
   LOCATION L0000763     VOLUME   465180.018 3809826.852 1062.00
   LOCATION L0000764     VOLUME   465173.095 3809821.767 1062.00
   LOCATION L0000765     VOLUME   465165.834 3809817.237 1062.00
   LOCATION L0000766     VOLUME   465158.133 3809813.431 1062.05
   LOCATION L0000767     VOLUME   465150.432 3809809.625 1062.28
   LOCATION L0000768     VOLUME   465142.731 3809805.819 1062.58
   LOCATION L0000769     VOLUME   465134.769 3809802.602 1062.86
   LOCATION L0000770     VOLUME   465126.780 3809799.446 1063.02
   LOCATION L0000771     VOLUME   465118.791 3809796.290 1063.12
   LOCATION L0000772     VOLUME   465110.476 3809794.241 1063.25
   LOCATION L0000773     VOLUME   465102.049 3809792.578 1063.41
   LOCATION L0000774     VOLUME   465093.622 3809790.915 1063.50
   LOCATION L0000775     VOLUME   465085.044 3809790.686 1063.51
   LOCATION L0000776     VOLUME   465076.455 3809790.571 1063.51
   LOCATION L0000777     VOLUME   465067.866 3809790.456 1063.52
   LOCATION L0000778     VOLUME   465059.277 3809790.341 1063.52
   LOCATION L0000779     VOLUME   465050.687 3809790.226 1063.52
   LOCATION L0000780     VOLUME   465042.098 3809790.111 1063.53
   LOCATION L0000781     VOLUME   465033.509 3809789.996 1063.63
   LOCATION L0000782     VOLUME   465024.920 3809789.881 1063.77
   LOCATION L0000783     VOLUME   465016.333 3809790.077 1063.90
   LOCATION L0000784     VOLUME   465007.748 3809790.359 1064.00
   LOCATION L0000785     VOLUME   464999.163 3809790.640 1064.00
   LOCATION L0000786     VOLUME   464990.577 3809790.922 1064.00
   LOCATION L0000787     VOLUME   464981.992 3809791.203 1064.00
   LOCATION L0000788     VOLUME   464973.407 3809791.485 1064.00
   LOCATION L0000789     VOLUME   464964.821 3809791.766 1064.00
   LOCATION L0000790     VOLUME   464956.236 3809792.048 1064.00
   LOCATION L0000791     VOLUME   464947.650 3809792.329 1064.04
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Main 100%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 7.354E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 9
** 464946.904, 3809792.666, 1064.00, 3.49, 6.51
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** 464736.807, 3809792.354, 1066.45, 3.49, 6.51
** 464737.119, 3809533.869, 1070.00, 3.49, 6.51
** 464839.826, 3809535.430, 1069.12, 3.49, 6.51
** 464953.147, 3809541.673, 1068.06, 3.49, 6.51
** 465010.276, 3809542.298, 1068.03, 3.49, 6.51
** 465066.781, 3809543.547, 1068.00, 3.49, 6.51
** 465144.201, 3809541.361, 1068.00, 3.49, 6.51
** 465196.224, 3809538.430, 1067.07, 3.49, 6.51
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   LOCATION L0000792     VOLUME   464939.904 3809792.655 1064.15
   LOCATION L0000793     VOLUME   464925.904 3809792.635 1064.36
   LOCATION L0000794     VOLUME   464911.904 3809792.614 1064.59
   LOCATION L0000795     VOLUME   464897.904 3809792.593 1064.85
   LOCATION L0000796     VOLUME   464883.904 3809792.572 1065.00
   LOCATION L0000797     VOLUME   464869.904 3809792.551 1065.00
   LOCATION L0000798     VOLUME   464855.904 3809792.531 1065.06
   LOCATION L0000799     VOLUME   464841.904 3809792.510 1065.27
   LOCATION L0000800     VOLUME   464827.904 3809792.489 1065.49
   LOCATION L0000801     VOLUME   464813.904 3809792.468 1065.74
   LOCATION L0000802     VOLUME   464799.904 3809792.447 1066.00
   LOCATION L0000803     VOLUME   464785.904 3809792.427 1066.00
   LOCATION L0000804     VOLUME   464771.904 3809792.406 1066.00
   LOCATION L0000805     VOLUME   464757.904 3809792.385 1066.18
   LOCATION L0000806     VOLUME   464743.904 3809792.364 1066.39
   LOCATION L0000807     VOLUME   464736.815 3809785.451 1066.72
   LOCATION L0000808     VOLUME   464736.832 3809771.451 1067.00
   LOCATION L0000809     VOLUME   464736.849 3809757.451 1067.00
   LOCATION L0000810     VOLUME   464736.866 3809743.451 1067.01
   LOCATION L0000811     VOLUME   464736.883 3809729.451 1067.06
   LOCATION L0000812     VOLUME   464736.900 3809715.451 1067.12
   LOCATION L0000813     VOLUME   464736.916 3809701.451 1067.54
   LOCATION L0000814     VOLUME   464736.933 3809687.451 1067.95
   LOCATION L0000815     VOLUME   464736.950 3809673.451 1068.00
   LOCATION L0000816     VOLUME   464736.967 3809659.451 1068.00
   LOCATION L0000817     VOLUME   464736.984 3809645.451 1068.35
   LOCATION L0000818     VOLUME   464737.001 3809631.451 1068.82
   LOCATION L0000819     VOLUME   464737.018 3809617.451 1069.03
   LOCATION L0000820     VOLUME   464737.035 3809603.451 1069.07
   LOCATION L0000821     VOLUME   464737.052 3809589.451 1069.29
   LOCATION L0000822     VOLUME   464737.069 3809575.451 1069.71
   LOCATION L0000823     VOLUME   464737.086 3809561.451 1070.00
   LOCATION L0000824     VOLUME   464737.102 3809547.451 1070.00
   LOCATION L0000825     VOLUME   464737.537 3809533.875 1070.01
   LOCATION L0000826     VOLUME   464751.535 3809534.088 1070.00
   LOCATION L0000827     VOLUME   464765.534 3809534.301 1070.00
   LOCATION L0000828     VOLUME   464779.532 3809534.514 1070.00
   LOCATION L0000829     VOLUME   464793.530 3809534.726 1070.00
   LOCATION L0000830     VOLUME   464807.529 3809534.939 1069.76
   LOCATION L0000831     VOLUME   464821.527 3809535.152 1069.30
   LOCATION L0000832     VOLUME   464835.526 3809535.364 1069.02
   LOCATION L0000833     VOLUME   464849.510 3809535.963 1069.00
   LOCATION L0000834     VOLUME   464863.489 3809536.734 1068.97
   LOCATION L0000835     VOLUME   464877.468 3809537.504 1068.95
   LOCATION L0000836     VOLUME   464891.447 3809538.274 1068.92
   LOCATION L0000837     VOLUME   464905.426 3809539.044 1068.90
   LOCATION L0000838     VOLUME   464919.404 3809539.814 1068.87
   LOCATION L0000839     VOLUME   464933.383 3809540.585 1068.47
   LOCATION L0000840     VOLUME   464947.362 3809541.355 1068.07
   LOCATION L0000841     VOLUME   464961.353 3809541.763 1068.00
   LOCATION L0000842     VOLUME   464975.352 3809541.916 1068.00
   LOCATION L0000843     VOLUME   464989.351 3809542.069 1068.00
   LOCATION L0000844     VOLUME   465003.350 3809542.222 1068.00
   LOCATION L0000845     VOLUME   465017.348 3809542.454 1068.00
   LOCATION L0000846     VOLUME   465031.345 3809542.763 1068.00
   LOCATION L0000847     VOLUME   465045.341 3809543.073 1067.96
   LOCATION L0000848     VOLUME   465059.338 3809543.382 1067.84
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   LOCATION L0000849     VOLUME   465073.333 3809543.362 1067.75
   LOCATION L0000850     VOLUME   465087.328 3809542.967 1067.77
   LOCATION L0000851     VOLUME   465101.322 3809542.572 1067.78
   LOCATION L0000852     VOLUME   465115.317 3809542.177 1067.79
   LOCATION L0000853     VOLUME   465129.311 3809541.782 1067.81
   LOCATION L0000854     VOLUME   465143.306 3809541.387 1067.82
   LOCATION L0000855     VOLUME   465157.284 3809540.624 1067.84
   LOCATION L0000856     VOLUME   465171.262 3809539.836 1067.54
   LOCATION L0000857     VOLUME   465185.240 3809539.049 1067.14
** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC Onsite 75%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.655E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
** 465645.972, 3810615.762, 1046.04, 3.49, 4.00
** 465624.799, 3810640.392, 1046.00, 3.49, 4.00
** 465588.071, 3810613.170, 1046.88, 3.49, 4.00
** 465554.367, 3810591.133, 1047.94, 3.49, 4.00
** 465540.972, 3810585.516, 1047.96, 3.49, 4.00
** 465521.528, 3810584.652, 1048.00, 3.49, 4.00
** 465480.911, 3810584.652, 1048.00, 3.49, 4.00
** ----------------------------------------------------------------
   LOCATION L0000858     VOLUME   465643.172 3810619.019 1045.99
   LOCATION L0000859     VOLUME   465637.572 3810625.533 1046.00
   LOCATION L0000860     VOLUME   465631.972 3810632.047 1046.00
   LOCATION L0000861     VOLUME   465626.373 3810638.561 1046.00
   LOCATION L0000862     VOLUME   465619.837 3810636.714 1046.00
   LOCATION L0000863     VOLUME   465612.936 3810631.599 1046.00
   LOCATION L0000864     VOLUME   465606.035 3810626.485 1046.08
   LOCATION L0000865     VOLUME   465599.134 3810621.370 1046.29
   LOCATION L0000866     VOLUME   465592.233 3810616.255 1046.59
   LOCATION L0000867     VOLUME   465585.217 3810611.304 1046.85
   LOCATION L0000868     VOLUME   465578.028 3810606.603 1047.02
   LOCATION L0000869     VOLUME   465570.838 3810601.902 1047.14
   LOCATION L0000870     VOLUME   465563.649 3810597.201 1047.34
   LOCATION L0000871     VOLUME   465556.459 3810592.501 1047.61
   LOCATION L0000872     VOLUME   465548.750 3810588.777 1047.91
   LOCATION L0000873     VOLUME   465540.817 3810585.509 1048.00
   LOCATION L0000874     VOLUME   465532.235 3810585.127 1048.00
   LOCATION L0000875     VOLUME   465523.654 3810584.746 1048.00
   LOCATION L0000876     VOLUME   465515.066 3810584.652 1048.00
   LOCATION L0000877     VOLUME   465506.476 3810584.652 1048.00
   LOCATION L0000878     VOLUME   465497.886 3810584.652 1048.00
   LOCATION L0000879     VOLUME   465489.296 3810584.652 1048.00
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Onsite 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.369E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 465136.099, 3810585.516, 1052.94, 3.49, 4.00
** 465483.504, 3810584.652, 1048.00, 3.49, 4.00
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   LOCATION L0000880     VOLUME   465140.394 3810585.505 1052.66
   LOCATION L0000881     VOLUME   465148.984 3810585.484 1052.38
   LOCATION L0000882     VOLUME   465157.574 3810585.462 1052.09
   LOCATION L0000883     VOLUME   465166.164 3810585.441 1052.01
   LOCATION L0000884     VOLUME   465174.754 3810585.420 1052.01
   LOCATION L0000885     VOLUME   465183.344 3810585.398 1052.00
   LOCATION L0000886     VOLUME   465191.934 3810585.377 1052.00
   LOCATION L0000887     VOLUME   465200.524 3810585.355 1052.00
   LOCATION L0000888     VOLUME   465209.114 3810585.334 1052.00
   LOCATION L0000889     VOLUME   465217.704 3810585.313 1052.00
   LOCATION L0000890     VOLUME   465226.294 3810585.291 1051.79
   LOCATION L0000891     VOLUME   465234.884 3810585.270 1051.51
   LOCATION L0000892     VOLUME   465243.474 3810585.249 1051.24
   LOCATION L0000893     VOLUME   465252.064 3810585.227 1051.02
   LOCATION L0000894     VOLUME   465260.653 3810585.206 1051.02
   LOCATION L0000895     VOLUME   465269.243 3810585.185 1051.01
   LOCATION L0000896     VOLUME   465277.833 3810585.163 1051.00
   LOCATION L0000897     VOLUME   465286.423 3810585.142 1050.79
   LOCATION L0000898     VOLUME   465295.013 3810585.120 1050.51
   LOCATION L0000899     VOLUME   465303.603 3810585.099 1050.23
   LOCATION L0000900     VOLUME   465312.193 3810585.078 1050.03
   LOCATION L0000901     VOLUME   465320.783 3810585.056 1050.02
   LOCATION L0000902     VOLUME   465329.373 3810585.035 1050.01
   LOCATION L0000903     VOLUME   465337.963 3810585.014 1050.00
   LOCATION L0000904     VOLUME   465346.553 3810584.992 1050.00
   LOCATION L0000905     VOLUME   465355.143 3810584.971 1050.00
   LOCATION L0000906     VOLUME   465363.733 3810584.949 1050.00
   LOCATION L0000907     VOLUME   465372.323 3810584.928 1049.92
   LOCATION L0000908     VOLUME   465380.913 3810584.907 1049.65
   LOCATION L0000909     VOLUME   465389.503 3810584.885 1049.37
   LOCATION L0000910     VOLUME   465398.093 3810584.864 1049.10
   LOCATION L0000911     VOLUME   465406.683 3810584.843 1049.03
   LOCATION L0000912     VOLUME   465415.273 3810584.821 1049.02
   LOCATION L0000913     VOLUME   465423.863 3810584.800 1049.01
   LOCATION L0000914     VOLUME   465432.453 3810584.779 1048.92
   LOCATION L0000915     VOLUME   465441.043 3810584.757 1048.65
   LOCATION L0000916     VOLUME   465449.633 3810584.736 1048.37
   LOCATION L0000917     VOLUME   465458.223 3810584.714 1048.10
   LOCATION L0000918     VOLUME   465466.813 3810584.693 1048.00
   LOCATION L0000919     VOLUME   465475.403 3810584.672 1048.00
** End of LINE VOLUME Source ID = SLINE8
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Onsite 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.168E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
** 464941.656, 3810586.812, 1055.17, 3.49, 4.00
** 464942.520, 3810557.862, 1055.97, 3.49, 4.00
** 464946.409, 3810544.467, 1055.93, 3.49, 4.00
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   LOCATION L0000920     VOLUME   465130.940 3810585.544 1052.97
   LOCATION L0000921     VOLUME   465122.350 3810585.602 1053.00
   LOCATION L0000922     VOLUME   465113.760 3810585.660 1053.01
   LOCATION L0000923     VOLUME   465105.170 3810585.717 1053.01
   LOCATION L0000924     VOLUME   465096.581 3810585.775 1053.12
   LOCATION L0000925     VOLUME   465087.991 3810585.832 1053.40
   LOCATION L0000926     VOLUME   465079.401 3810585.890 1053.69
   LOCATION L0000927     VOLUME   465070.811 3810585.947 1053.97
   LOCATION L0000928     VOLUME   465062.221 3810586.005 1054.00
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   LOCATION L0000929     VOLUME   465053.632 3810586.062 1054.00
   LOCATION L0000930     VOLUME   465045.042 3810586.120 1054.00
   LOCATION L0000931     VOLUME   465036.452 3810586.177 1054.12
   LOCATION L0000932     VOLUME   465027.862 3810586.235 1054.40
   LOCATION L0000933     VOLUME   465019.272 3810586.292 1054.68
   LOCATION L0000934     VOLUME   465010.682 3810586.350 1054.96
   LOCATION L0000935     VOLUME   465002.093 3810586.407 1054.99
   LOCATION L0000936     VOLUME   464993.503 3810586.465 1054.99
   LOCATION L0000937     VOLUME   464984.913 3810586.522 1055.00
   LOCATION L0000938     VOLUME   464976.323 3810586.580 1055.00
   LOCATION L0000939     VOLUME   464967.733 3810586.637 1055.00
   LOCATION L0000940     VOLUME   464959.144 3810586.695 1055.00
   LOCATION L0000941     VOLUME   464950.554 3810586.752 1055.00
   LOCATION L0000942     VOLUME   464941.964 3810586.810 1055.26
   LOCATION L0000943     VOLUME   464941.903 3810578.534 1055.45
   LOCATION L0000944     VOLUME   464942.159 3810569.948 1055.65
   LOCATION L0000945     VOLUME   464942.416 3810561.362 1055.86
   LOCATION L0000946     VOLUME   464943.939 3810552.975 1056.00
   LOCATION L0000947     VOLUME   464946.334 3810544.725 1056.00
** End of LINE VOLUME Source ID = SLINE9
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Onsite 20%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.439E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 465073.877, 3810553.973, 1054.00, 3.49, 4.00
** 465073.445, 3810585.948, 1053.98, 3.49, 4.00
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
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   LOCATION L0000948     VOLUME   465073.819 3810558.267 1053.99
   LOCATION L0000949     VOLUME   465073.703 3810566.857 1053.95
   LOCATION L0000950     VOLUME   465073.587 3810575.446 1053.92
   LOCATION L0000951     VOLUME   465073.471 3810584.035 1053.89
   LOCATION L0000952     VOLUME   465080.122 3810585.901 1053.66
   LOCATION L0000953     VOLUME   465088.712 3810585.841 1053.38
   LOCATION L0000954     VOLUME   465097.301 3810585.781 1053.09
   LOCATION L0000955     VOLUME   465105.891 3810585.721 1053.01
   LOCATION L0000956     VOLUME   465114.481 3810585.661 1053.00
   LOCATION L0000957     VOLUME   465123.071 3810585.601 1053.00
   LOCATION L0000958     VOLUME   465131.661 3810585.541 1052.94
** End of LINE VOLUME Source ID = SLINE10
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000521     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000522     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000523     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000524     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000525     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000526     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000527     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000528     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000529     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000530     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000531     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000532     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000533     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000534     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000535     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000536     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000537     0.0000003655      3.49      4.00      3.25
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   SRCPARAM L0000538     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000539     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000540     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000541     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000542     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000543     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000544     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000545     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000546     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000547     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000548     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000549     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000550     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000551     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000552     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000553     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000554     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000555     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000556     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000557     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000558     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000559     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000560     0.0000003655      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000561     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000562     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000563     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000564     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000565     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000566     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000567     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000568     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000569     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000570     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000571     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000572     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000573     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000574     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000575     0.000000003355      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0000576     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000577     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000578     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000579     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000580     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000581     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000582     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000583     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000584     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000585     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000586     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000587     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000588     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000589     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000590     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000591     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000592     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000593     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000594     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000595     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000596     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000597     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000598     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000599     0.00000001709      3.49      4.00      3.25
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   SRCPARAM L0000600     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000601     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000602     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000603     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000604     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000605     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000606     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000607     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000608     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000609     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000610     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000611     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000612     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000613     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000614     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000615     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000616     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000617     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000618     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000619     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000620     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000621     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000622     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000623     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000624     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000625     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000626     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000627     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000628     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000629     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000630     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000631     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000632     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000633     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000634     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000635     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000636     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000637     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000638     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000639     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000640     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000641     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000642     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000643     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000644     0.00000001709      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0000645     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000646     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000647     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000648     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000649     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000650     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000651     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000652     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000653     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000654     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000655     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000656     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000657     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000658     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000659     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000660     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000661     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000662     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000663     0.00000006788      3.49      4.00      3.25
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SRCPARAM L0000664     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000665     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000666     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000667     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000668     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000669     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000670     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000671     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000672     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000673     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000674     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000675     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000676     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000677     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000678     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000679     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000680     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000681     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000682     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000683     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000684     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000685     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000686     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000687     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000688     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000689     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000690     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000691     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000692     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000693     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000694     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000695     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000696     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000697     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000698     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000699     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000700     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000701     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000702     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000703     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000704     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000705     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000706     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000707     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000708     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000709     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000710     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000711     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000712     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000713     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000714     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000715     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000716     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000717     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000718     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000719     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000720     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000721     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000722     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000723     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000724     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000725     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000726     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000727     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000728     0.00000006788      3.49      4.00      3.25
SRCPARAM L0000729     0.00000006788      3.49      4.00      3.25
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   SRCPARAM L0000730     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000731     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000732     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000733     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000734     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000735     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000736     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000737     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000738     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000739     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000740     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000741     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000742     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000743     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000744     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000745     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000746     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000747     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000748     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000749     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000750     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000751     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000752     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000753     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000754     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000755     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000756     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000757     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000758     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000759     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000760     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000761     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000762     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000763     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000764     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000765     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000766     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000767     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000768     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000769     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000770     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000771     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000772     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000773     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000774     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000775     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000776     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000777     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000778     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000779     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000780     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000781     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000782     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000783     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000784     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000785     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000786     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000787     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000788     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000789     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000790     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000791     0.00000006788      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0000792     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000793     0.0000001114      3.49      6.51      3.25
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   SRCPARAM L0000794     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000795     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000796     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000797     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000798     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000799     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000800     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000801     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000802     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000803     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000804     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000805     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000806     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000807     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000808     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000809     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000810     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000811     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000812     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000813     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000814     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000815     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000816     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000817     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000818     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000819     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000820     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000821     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000822     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000823     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000824     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000825     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000826     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000827     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000828     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000829     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000830     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000831     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000832     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000833     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000834     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000835     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000836     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000837     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000838     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000839     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000840     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000841     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000842     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000843     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000844     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000845     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000846     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000847     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000848     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000849     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000850     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000851     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000852     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000853     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000854     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000855     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000856     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000857     0.0000001114      3.49      6.51      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE7
```

```
   SRCPARAM L0000858     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000859     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000860     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000861     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000862     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000863     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000864     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000865     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000866     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000867     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000868     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000869     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000870     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000871     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000872     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000873     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000874     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000875     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000876     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000877     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000878     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000879     0.0000001207      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0000880     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000881     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000882     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000883     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000884     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000885     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000886     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000887     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000888     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000889     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000890     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000891     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000892     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000893     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000894     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000895     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000896     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000897     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000898     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000899     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000900     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000901     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000902     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000903     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000904     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000905     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000906     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000907     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000908     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000909     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000910     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000911     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000912     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000913     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000914     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000915     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000916     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000917     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000918     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000919     0.0000001592      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE9
```

```
   SRCPARAM L0000920     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000921     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000922     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000923     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000924     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000925     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000926     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000927     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000928     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000929     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000930     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000931     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000932     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000933     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000934     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000935     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000936     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000937     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000938     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000939     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000940     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000941     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000942     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000943     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000944     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000945     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000946     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000947     0.000000007743      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0000948     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000949     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000950     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000951     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000952     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000953     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000954     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000955     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000956     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000957     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000958     0.00000003126      3.49      4.00      3.25
** ------------------------------------------------------------------
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "14848 Ops.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
   PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
   SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
   UAIRDATA 3120 2015
   PROFBASE 588.3 METERS
ME FINISHED
```

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** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14848 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14848 Ops.sum"
OU FINISHED
**
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** Project Parameters
**************************************
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.0.0
** Lakes Environmental Software Inc.
** Date: 9/19/2022
** File: C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848 Ops\14848 Ops.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto Industrial\14848
   MODELOPT DFAULT CONC
   AVERTIME ANNUAL
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "14848 Ops.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Idle
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 0.00001462
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 465137.392, 3810605.322, 1052.85, 3.49, 4.00
** 465480.977, 3810605.322, 1047.94, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0000521     VOLUME   465141.687 3810605.322 1052.61
   LOCATION L0000522     VOLUME   465150.277 3810605.322 1052.32
   LOCATION L0000523     VOLUME   465158.867 3810605.322 1052.04
   LOCATION L0000524     VOLUME   465167.457 3810605.322 1052.00
   LOCATION L0000525     VOLUME   465176.047 3810605.322 1052.00
   LOCATION L0000526     VOLUME   465184.637 3810605.322 1052.00
   LOCATION L0000527     VOLUME   465193.227 3810605.322 1051.93
   LOCATION L0000528     VOLUME   465201.817 3810605.322 1051.75
   LOCATION L0000529     VOLUME   465210.407 3810605.322 1051.56
   LOCATION L0000530     VOLUME   465218.997 3810605.322 1051.38
   LOCATION L0000531     VOLUME   465227.587 3810605.322 1051.26
   LOCATION L0000532     VOLUME   465236.177 3810605.322 1051.16
   LOCATION L0000533     VOLUME   465244.767 3810605.322 1051.06
   LOCATION L0000534     VOLUME   465253.357 3810605.322 1050.93
   LOCATION L0000535     VOLUME   465261.947 3810605.322 1050.74
   LOCATION L0000536     VOLUME   465270.537 3810605.322 1050.56
   LOCATION L0000537     VOLUME   465279.127 3810605.322 1050.37
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```
   LOCATION L0000538     VOLUME   465287.717 3810605.322 1050.26
   LOCATION L0000539     VOLUME   465296.307 3810605.322 1050.16
   LOCATION L0000540     VOLUME   465304.897 3810605.322 1050.06
   LOCATION L0000541     VOLUME   465313.487 3810605.322 1050.00
   LOCATION L0000542     VOLUME   465322.077 3810605.322 1050.00
   LOCATION L0000543     VOLUME   465330.667 3810605.322 1050.00
   LOCATION L0000544     VOLUME   465339.257 3810605.322 1050.00
   LOCATION L0000545     VOLUME   465347.847 3810605.322 1049.83
   LOCATION L0000546     VOLUME   465356.437 3810605.322 1049.65
   LOCATION L0000547     VOLUME   465365.027 3810605.322 1049.46
   LOCATION L0000548     VOLUME   465373.617 3810605.322 1049.31
   LOCATION L0000549     VOLUME   465382.207 3810605.322 1049.21
   LOCATION L0000550     VOLUME   465390.797 3810605.322 1049.11
   LOCATION L0000551     VOLUME   465399.387 3810605.322 1049.01
   LOCATION L0000552     VOLUME   465407.977 3810605.322 1048.83
   LOCATION L0000553     VOLUME   465416.567 3810605.322 1048.64
   LOCATION L0000554     VOLUME   465425.157 3810605.322 1048.46
   LOCATION L0000555     VOLUME   465433.747 3810605.322 1048.31
   LOCATION L0000556     VOLUME   465442.337 3810605.322 1048.21
   LOCATION L0000557     VOLUME   465450.927 3810605.322 1048.11
   LOCATION L0000558     VOLUME   465459.517 3810605.322 1048.01
   LOCATION L0000559     VOLUME   465468.107 3810605.322 1048.00
   LOCATION L0000560     VOLUME   465476.697 3810605.322 1048.00
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Palmetto 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 5.032E-08
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 464947.412, 3810532.648, 1056.00, 3.49, 4.00
** 465005.361, 3810539.256, 1055.06, 3.49, 4.00
** 465073.985, 3810540.781, 1054.00, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0000561     VOLUME   464951.679 3810533.135 1055.99
   LOCATION L0000562     VOLUME   464960.214 3810534.108 1055.91
   LOCATION L0000563     VOLUME   464968.749 3810535.081 1055.81
   LOCATION L0000564     VOLUME   464977.283 3810536.054 1055.69
   LOCATION L0000565     VOLUME   464985.818 3810537.028 1055.51
   LOCATION L0000566     VOLUME   464994.353 3810538.001 1055.31
   LOCATION L0000567     VOLUME   465002.888 3810538.974 1055.13
   LOCATION L0000568     VOLUME   465011.460 3810539.392 1054.95
   LOCATION L0000569     VOLUME   465020.048 3810539.583 1054.66
   LOCATION L0000570     VOLUME   465028.636 3810539.773 1054.38
   LOCATION L0000571     VOLUME   465037.224 3810539.964 1054.09
   LOCATION L0000572     VOLUME   465045.812 3810540.155 1054.00
   LOCATION L0000573     VOLUME   465054.399 3810540.346 1054.00
   LOCATION L0000574     VOLUME   465062.987 3810540.537 1054.00
   LOCATION L0000575     VOLUME   465071.575 3810540.728 1054.00
** End of LINE VOLUME Source ID = SLINE3
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Palmetto 25%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 1.179E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
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** 465074.273, 3810540.960, 1054.00, 3.49, 4.00
** 465393.632, 3810538.463, 1050.25, 3.49, 4.00
** 465476.048, 3810539.087, 1049.15, 3.49, 4.00
** 465526.621, 3810547.516, 1048.15, 3.49, 4.00
** 465584.062, 3810564.374, 1048.05, 3.49, 4.00
** 465625.582, 3810584.665, 1047.09, 3.49, 4.00
** 465655.863, 3810603.708, 1046.23, 3.49, 4.00
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   LOCATION L0000576     VOLUME   465078.568 3810540.927 1054.00
   LOCATION L0000577     VOLUME   465087.157 3810540.859 1054.00
   LOCATION L0000578     VOLUME   465095.747 3810540.792 1054.00
   LOCATION L0000579     VOLUME   465104.337 3810540.725 1053.85
   LOCATION L0000580     VOLUME   465112.927 3810540.658 1053.57
   LOCATION L0000581     VOLUME   465121.516 3810540.591 1053.28
   LOCATION L0000582     VOLUME   465130.106 3810540.524 1053.00
   LOCATION L0000583     VOLUME   465138.696 3810540.456 1053.00
   LOCATION L0000584     VOLUME   465147.286 3810540.389 1053.00
   LOCATION L0000585     VOLUME   465155.875 3810540.322 1053.00
   LOCATION L0000586     VOLUME   465164.465 3810540.255 1052.85
   LOCATION L0000587     VOLUME   465173.055 3810540.188 1052.56
   LOCATION L0000588     VOLUME   465181.645 3810540.121 1052.28
   LOCATION L0000589     VOLUME   465190.234 3810540.053 1052.00
   LOCATION L0000590     VOLUME   465198.824 3810539.986 1052.00
   LOCATION L0000591     VOLUME   465207.414 3810539.919 1052.00
   LOCATION L0000592     VOLUME   465216.003 3810539.852 1052.00
   LOCATION L0000593     VOLUME   465224.593 3810539.785 1052.00
   LOCATION L0000594     VOLUME   465233.183 3810539.717 1052.00
   LOCATION L0000595     VOLUME   465241.773 3810539.650 1052.00
   LOCATION L0000596     VOLUME   465250.362 3810539.583 1051.99
   LOCATION L0000597     VOLUME   465258.952 3810539.516 1051.86
   LOCATION L0000598     VOLUME   465267.542 3810539.449 1051.74
   LOCATION L0000599     VOLUME   465276.132 3810539.382 1051.61
   LOCATION L0000600     VOLUME   465284.721 3810539.314 1051.47
   LOCATION L0000601     VOLUME   465293.311 3810539.247 1051.31
   LOCATION L0000602     VOLUME   465301.901 3810539.180 1051.15
   LOCATION L0000603     VOLUME   465310.491 3810539.113 1050.99
   LOCATION L0000604     VOLUME   465319.080 3810539.046 1050.87
   LOCATION L0000605     VOLUME   465327.670 3810538.979 1050.74
   LOCATION L0000606     VOLUME   465336.260 3810538.911 1050.62
   LOCATION L0000607     VOLUME   465344.850 3810538.844 1050.57
   LOCATION L0000608     VOLUME   465353.439 3810538.777 1050.57
   LOCATION L0000609     VOLUME   465362.029 3810538.710 1050.57
   LOCATION L0000610     VOLUME   465370.619 3810538.643 1050.56
   LOCATION L0000611     VOLUME   465379.208 3810538.576 1050.40
   LOCATION L0000612     VOLUME   465387.798 3810538.508 1050.24
   LOCATION L0000613     VOLUME   465396.388 3810538.484 1050.07
   LOCATION L0000614     VOLUME   465404.978 3810538.549 1049.93
   LOCATION L0000615     VOLUME   465413.567 3810538.614 1049.81
   LOCATION L0000616     VOLUME   465422.157 3810538.679 1049.69
   LOCATION L0000617     VOLUME   465430.747 3810538.744 1049.56
   LOCATION L0000618     VOLUME   465439.337 3810538.809 1049.39
   LOCATION L0000619     VOLUME   465447.926 3810538.874 1049.23
   LOCATION L0000620     VOLUME   465456.516 3810538.939 1049.07
   LOCATION L0000621     VOLUME   465465.106 3810539.004 1049.00
   LOCATION L0000622     VOLUME   465473.696 3810539.069 1048.57
   LOCATION L0000623     VOLUME   465482.201 3810540.113 1048.54
   LOCATION L0000624     VOLUME   465490.674 3810541.525 1048.49
   LOCATION L0000625     VOLUME   465499.147 3810542.937 1048.44
   LOCATION L0000626     VOLUME   465507.620 3810544.349 1048.39
   LOCATION L0000627     VOLUME   465516.093 3810545.761 1048.35
   LOCATION L0000628     VOLUME   465524.566 3810547.174 1048.30
   LOCATION L0000629     VOLUME   465532.865 3810549.348 1048.23
   LOCATION L0000630     VOLUME   465541.107 3810551.767 1048.15
   LOCATION L0000631     VOLUME   465549.350 3810554.186 1048.07
   LOCATION L0000632     VOLUME   465557.592 3810556.605 1048.00
   LOCATION L0000633     VOLUME   465565.834 3810559.024 1047.95
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   LOCATION L0000634     VOLUME   465574.077 3810561.443 1047.86
   LOCATION L0000635     VOLUME   465582.319 3810563.862 1047.74
   LOCATION L0000636     VOLUME   465590.148 3810567.348 1047.63
   LOCATION L0000637     VOLUME   465597.865 3810571.120 1047.50
   LOCATION L0000638     VOLUME   465605.583 3810574.891 1047.38
   LOCATION L0000639     VOLUME   465613.300 3810578.663 1047.22
   LOCATION L0000640     VOLUME   465621.018 3810582.435 1047.08
   LOCATION L0000641     VOLUME   465628.554 3810586.534 1046.99
   LOCATION L0000642     VOLUME   465635.825 3810591.107 1046.84
   LOCATION L0000643     VOLUME   465643.097 3810595.680 1046.61
   LOCATION L0000644     VOLUME   465650.368 3810600.253 1046.34
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Amargosa 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 9.979E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 15
** 465655.863, 3810603.396, 1046.24, 3.49, 4.00
** 465689.891, 3810627.122, 1046.00, 3.49, 4.00
** 465695.510, 3810626.497, 1045.93, 3.49, 4.00
** 465710.807, 3810615.883, 1045.78, 3.49, 4.00
** 465636.508, 3810500.377, 1048.00, 3.49, 4.00
** 465492.906, 3810279.978, 1052.95, 3.49, 4.00
** 465332.757, 3810033.356, 1057.45, 3.49, 4.00
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   LOCATION L0000649     VOLUME   465687.572 3810625.505 1045.69
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   LOCATION L0000651     VOLUME   465702.657 3810621.538 1045.74
   LOCATION L0000652     VOLUME   465709.714 3810616.641 1045.66
   LOCATION L0000653     VOLUME   465706.879 3810609.777 1045.82
   LOCATION L0000654     VOLUME   465702.232 3810602.553 1045.96
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   LOCATION L0000663     VOLUME   465660.408 3810537.533 1047.20
   LOCATION L0000664     VOLUME   465655.761 3810530.308 1047.40
   LOCATION L0000665     VOLUME   465651.114 3810523.084 1047.66
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LOCATION L0000678 VOLUME 465590.286 3810429.435 1048.15
LOCATION L0000679 VOLUME 465585.596 3810422.238 1048.38
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LOCATION L0000712 VOLUME 465430.995 3810184.638 1054.36
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LOCATION L0000714 VOLUME 465421.639 3810170.230 1054.86
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   LOCATION L0000739     VOLUME   465303.941 3809990.613 1058.17
   LOCATION L0000740     VOLUME   465299.139 3809983.490 1058.41
   LOCATION L0000741     VOLUME   465294.337 3809976.368 1058.67
   LOCATION L0000742     VOLUME   465289.535 3809969.245 1058.86
   LOCATION L0000743     VOLUME   465284.733 3809962.123 1058.97
   LOCATION L0000744     VOLUME   465279.931 3809955.000 1059.03
   LOCATION L0000745     VOLUME   465275.130 3809947.878 1059.39
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   LOCATION L0000748     VOLUME   465260.724 3809926.510 1059.99
   LOCATION L0000749     VOLUME   465255.922 3809919.388 1060.18
   LOCATION L0000750     VOLUME   465251.120 3809912.265 1060.44
   LOCATION L0000751     VOLUME   465246.318 3809905.143 1060.61
   LOCATION L0000752     VOLUME   465241.517 3809898.020 1060.67
   LOCATION L0000753     VOLUME   465236.715 3809890.898 1060.63
   LOCATION L0000754     VOLUME   465231.913 3809883.775 1060.64
   LOCATION L0000755     VOLUME   465226.618 3809877.029 1060.71
   LOCATION L0000756     VOLUME   465221.010 3809870.523 1060.85
   LOCATION L0000757     VOLUME   465215.402 3809864.016 1061.06
   LOCATION L0000758     VOLUME   465209.794 3809857.509 1061.28
   LOCATION L0000759     VOLUME   465204.186 3809851.002 1061.50
   LOCATION L0000760     VOLUME   465198.578 3809844.495 1061.72
   LOCATION L0000761     VOLUME   465192.970 3809837.988 1061.93
   LOCATION L0000762     VOLUME   465186.942 3809831.936 1062.00
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   LOCATION L0000764     VOLUME   465173.095 3809821.767 1062.00
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   LOCATION L0000766     VOLUME   465158.133 3809813.431 1062.05
   LOCATION L0000767     VOLUME   465150.432 3809809.625 1062.28
   LOCATION L0000768     VOLUME   465142.731 3809805.819 1062.58
   LOCATION L0000769     VOLUME   465134.769 3809802.602 1062.86
   LOCATION L0000770     VOLUME   465126.780 3809799.446 1063.02
   LOCATION L0000771     VOLUME   465118.791 3809796.290 1063.12
   LOCATION L0000772     VOLUME   465110.476 3809794.241 1063.25
   LOCATION L0000773     VOLUME   465102.049 3809792.578 1063.41
   LOCATION L0000774     VOLUME   465093.622 3809790.915 1063.50
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   LOCATION L0000776     VOLUME   465076.455 3809790.571 1063.51
   LOCATION L0000777     VOLUME   465067.866 3809790.456 1063.52
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   LOCATION L0000779     VOLUME   465050.687 3809790.226 1063.52
   LOCATION L0000780     VOLUME   465042.098 3809790.111 1063.53
   LOCATION L0000781     VOLUME   465033.509 3809789.996 1063.63
   LOCATION L0000782     VOLUME   465024.920 3809789.881 1063.77
   LOCATION L0000783     VOLUME   465016.333 3809790.077 1063.90
   LOCATION L0000784     VOLUME   465007.748 3809790.359 1064.00
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   LOCATION L0000790     VOLUME   464956.236 3809792.048 1064.00
   LOCATION L0000791     VOLUME   464947.650 3809792.329 1064.04
** End of LINE VOLUME Source ID = SLINE5
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE6
** DESCRSRC Main 100%
** PREFIX
** Length of Side = 14.00
** Configuration = Adjacent
** Emission Rate = 7.354E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 9
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** 464839.826, 3809535.430, 1069.12, 3.49, 6.51
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** 465010.276, 3809542.298, 1068.03, 3.49, 6.51
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   LOCATION L0000812     VOLUME   464736.900 3809715.451 1067.12
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   LOCATION L0000814     VOLUME   464736.933 3809687.451 1067.95
   LOCATION L0000815     VOLUME   464736.950 3809673.451 1068.00
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   LOCATION L0000818     VOLUME   464737.001 3809631.451 1068.82
   LOCATION L0000819     VOLUME   464737.018 3809617.451 1069.03
   LOCATION L0000820     VOLUME   464737.035 3809603.451 1069.07
   LOCATION L0000821     VOLUME   464737.052 3809589.451 1069.29
   LOCATION L0000822     VOLUME   464737.069 3809575.451 1069.71
   LOCATION L0000823     VOLUME   464737.086 3809561.451 1070.00
   LOCATION L0000824     VOLUME   464737.102 3809547.451 1070.00
   LOCATION L0000825     VOLUME   464737.537 3809533.875 1070.01
   LOCATION L0000826     VOLUME   464751.535 3809534.088 1070.00
   LOCATION L0000827     VOLUME   464765.534 3809534.301 1070.00
   LOCATION L0000828     VOLUME   464779.532 3809534.514 1070.00
   LOCATION L0000829     VOLUME   464793.530 3809534.726 1070.00
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   LOCATION L0000831     VOLUME   464821.527 3809535.152 1069.30
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   LOCATION L0000833     VOLUME   464849.510 3809535.963 1069.00
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   LOCATION L0000840     VOLUME   464947.362 3809541.355 1068.07
   LOCATION L0000841     VOLUME   464961.353 3809541.763 1068.00
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   LOCATION L0000843     VOLUME   464989.351 3809542.069 1068.00
   LOCATION L0000844     VOLUME   465003.350 3809542.222 1068.00
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   LOCATION L0000847     VOLUME   465045.341 3809543.073 1067.96
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   LOCATION L0000850     VOLUME   465087.328 3809542.967 1067.77
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   LOCATION L0000852     VOLUME   465115.317 3809542.177 1067.79
   LOCATION L0000853     VOLUME   465129.311 3809541.782 1067.81
   LOCATION L0000854     VOLUME   465143.306 3809541.387 1067.82
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** End of LINE VOLUME Source ID = SLINE6
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE7
** DESCRSRC Onsite 75%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.655E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 7
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   LOCATION L0000860     VOLUME   465631.972 3810632.047 1046.00
   LOCATION L0000861     VOLUME   465626.373 3810638.561 1046.00
   LOCATION L0000862     VOLUME   465619.837 3810636.714 1046.00
   LOCATION L0000863     VOLUME   465612.936 3810631.599 1046.00
   LOCATION L0000864     VOLUME   465606.035 3810626.485 1046.08
   LOCATION L0000865     VOLUME   465599.134 3810621.370 1046.29
   LOCATION L0000866     VOLUME   465592.233 3810616.255 1046.59
   LOCATION L0000867     VOLUME   465585.217 3810611.304 1046.85
   LOCATION L0000868     VOLUME   465578.028 3810606.603 1047.02
   LOCATION L0000869     VOLUME   465570.838 3810601.902 1047.14
   LOCATION L0000870     VOLUME   465563.649 3810597.201 1047.34
   LOCATION L0000871     VOLUME   465556.459 3810592.501 1047.61
   LOCATION L0000872     VOLUME   465548.750 3810588.777 1047.91
   LOCATION L0000873     VOLUME   465540.817 3810585.509 1048.00
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   LOCATION L0000876     VOLUME   465515.066 3810584.652 1048.00
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   LOCATION L0000878     VOLUME   465497.886 3810584.652 1048.00
   LOCATION L0000879     VOLUME   465489.296 3810584.652 1048.00
** End of LINE VOLUME Source ID = SLINE7
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE8
** DESCRSRC Onsite 100%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 6.369E-06
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 2
** 465136.099, 3810585.516, 1052.94, 3.49, 4.00
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   LOCATION L0000883     VOLUME   465166.164 3810585.441 1052.01
   LOCATION L0000884     VOLUME   465174.754 3810585.420 1052.01
   LOCATION L0000885     VOLUME   465183.344 3810585.398 1052.00
   LOCATION L0000886     VOLUME   465191.934 3810585.377 1052.00
   LOCATION L0000887     VOLUME   465200.524 3810585.355 1052.00
   LOCATION L0000888     VOLUME   465209.114 3810585.334 1052.00
   LOCATION L0000889     VOLUME   465217.704 3810585.313 1052.00
   LOCATION L0000890     VOLUME   465226.294 3810585.291 1051.79
   LOCATION L0000891     VOLUME   465234.884 3810585.270 1051.51
   LOCATION L0000892     VOLUME   465243.474 3810585.249 1051.24
   LOCATION L0000893     VOLUME   465252.064 3810585.227 1051.02
   LOCATION L0000894     VOLUME   465260.653 3810585.206 1051.02
   LOCATION L0000895     VOLUME   465269.243 3810585.185 1051.01
   LOCATION L0000896     VOLUME   465277.833 3810585.163 1051.00
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   LOCATION L0000898     VOLUME   465295.013 3810585.120 1050.51
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   LOCATION L0000907     VOLUME   465372.323 3810584.928 1049.92
   LOCATION L0000908     VOLUME   465380.913 3810584.907 1049.65
   LOCATION L0000909     VOLUME   465389.503 3810584.885 1049.37
   LOCATION L0000910     VOLUME   465398.093 3810584.864 1049.10
   LOCATION L0000911     VOLUME   465406.683 3810584.843 1049.03
   LOCATION L0000912     VOLUME   465415.273 3810584.821 1049.02
   LOCATION L0000913     VOLUME   465423.863 3810584.800 1049.01
   LOCATION L0000914     VOLUME   465432.453 3810584.779 1048.92
   LOCATION L0000915     VOLUME   465441.043 3810584.757 1048.65
   LOCATION L0000916     VOLUME   465449.633 3810584.736 1048.37
   LOCATION L0000917     VOLUME   465458.223 3810584.714 1048.10
   LOCATION L0000918     VOLUME   465466.813 3810584.693 1048.00
   LOCATION L0000919     VOLUME   465475.403 3810584.672 1048.00
** End of LINE VOLUME Source ID = SLINE8
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE9
** DESCRSRC Onsite 5%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 2.168E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 4
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
** 464941.656, 3810586.812, 1055.17, 3.49, 4.00
** 464942.520, 3810557.862, 1055.97, 3.49, 4.00
** 464946.409, 3810544.467, 1055.93, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0000920     VOLUME   465130.940 3810585.544 1052.97
   LOCATION L0000921     VOLUME   465122.350 3810585.602 1053.00
   LOCATION L0000922     VOLUME   465113.760 3810585.660 1053.01
   LOCATION L0000923     VOLUME   465105.170 3810585.717 1053.01
   LOCATION L0000924     VOLUME   465096.581 3810585.775 1053.12
   LOCATION L0000925     VOLUME   465087.991 3810585.832 1053.40
   LOCATION L0000926     VOLUME   465079.401 3810585.890 1053.69
   LOCATION L0000927     VOLUME   465070.811 3810585.947 1053.97
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   LOCATION L0000928     VOLUME   465062.221 3810586.005 1054.00
   LOCATION L0000929     VOLUME   465053.632 3810586.062 1054.00
   LOCATION L0000930     VOLUME   465045.042 3810586.120 1054.00
   LOCATION L0000931     VOLUME   465036.452 3810586.177 1054.12
   LOCATION L0000932     VOLUME   465027.862 3810586.235 1054.40
   LOCATION L0000933     VOLUME   465019.272 3810586.292 1054.68
   LOCATION L0000934     VOLUME   465010.682 3810586.350 1054.96
   LOCATION L0000935     VOLUME   465002.093 3810586.407 1054.99
   LOCATION L0000936     VOLUME   464993.503 3810586.465 1054.99
   LOCATION L0000937     VOLUME   464984.913 3810586.522 1055.00
   LOCATION L0000938     VOLUME   464976.323 3810586.580 1055.00
   LOCATION L0000939     VOLUME   464967.733 3810586.637 1055.00
   LOCATION L0000940     VOLUME   464959.144 3810586.695 1055.00
   LOCATION L0000941     VOLUME   464950.554 3810586.752 1055.00
   LOCATION L0000942     VOLUME   464941.964 3810586.810 1055.26
   LOCATION L0000943     VOLUME   464941.903 3810578.534 1055.45
   LOCATION L0000944     VOLUME   464942.159 3810569.948 1055.65
   LOCATION L0000945     VOLUME   464942.416 3810561.362 1055.86
   LOCATION L0000946     VOLUME   464943.939 3810552.975 1056.00
   LOCATION L0000947     VOLUME   464946.334 3810544.725 1056.00
** End of LINE VOLUME Source ID = SLINE9
** ----------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE10
** DESCRSRC Onsite 20%
** PREFIX
** Length of Side = 8.59
** Configuration = Adjacent
** Emission Rate = 3.439E-07
** Vertical Dimension = 6.99
** SZINIT = 3.25
** Nodes = 3
** 465073.877, 3810553.973, 1054.00, 3.49, 4.00
** 465073.445, 3810585.948, 1053.98, 3.49, 4.00
** 465135.235, 3810585.516, 1052.96, 3.49, 4.00
** ----------------------------------------------------------------------
   LOCATION L0000948     VOLUME   465073.819 3810558.267 1053.99
   LOCATION L0000949     VOLUME   465073.703 3810566.857 1053.95
   LOCATION L0000950     VOLUME   465073.587 3810575.446 1053.92
   LOCATION L0000951     VOLUME   465073.471 3810584.035 1053.89
   LOCATION L0000952     VOLUME   465080.122 3810585.901 1053.66
   LOCATION L0000953     VOLUME   465088.712 3810585.841 1053.38
   LOCATION L0000954     VOLUME   465097.301 3810585.781 1053.09
   LOCATION L0000955     VOLUME   465105.891 3810585.721 1053.01
   LOCATION L0000956     VOLUME   465114.481 3810585.661 1053.00
   LOCATION L0000957     VOLUME   465123.071 3810585.601 1053.00
   LOCATION L0000958     VOLUME   465131.661 3810585.541 1052.94
** End of LINE VOLUME Source ID = SLINE10
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000521     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000522     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000523     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000524     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000525     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000526     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000527     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000528     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000529     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000530     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000531     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000532     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000533     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000534     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000535     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000536     0.0000003655      3.49      4.00      3.25
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   SRCPARAM L0000537     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000538     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000539     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000540     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000541     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000542     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000543     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000544     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000545     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000546     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000547     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000548     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000549     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000550     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000551     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000552     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000553     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000554     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000555     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000556     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000557     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000558     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000559     0.0000003655      3.49      4.00      3.25
   SRCPARAM L0000560     0.0000003655      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000561     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000562     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000563     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000564     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000565     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000566     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000567     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000568     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000569     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000570     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000571     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000572     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000573     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000574     0.000000003355      3.49      4.00      3.25
   SRCPARAM L0000575     0.000000003355      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0000576     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000577     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000578     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000579     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000580     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000581     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000582     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000583     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000584     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000585     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000586     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000587     0.00000001709      3.49      4.00      3.25
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   SRCPARAM L0000589     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000590     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000591     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000592     0.00000001709      3.49      4.00      3.25
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   SRCPARAM L0000598     0.00000001709      3.49      4.00      3.25
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   SRCPARAM L0000599     0.00000001709      3.49      4.00      3.25
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   SRCPARAM L0000620     0.00000001709      3.49      4.00      3.25
   SRCPARAM L0000621     0.00000001709      3.49      4.00      3.25
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   SRCPARAM L0000623     0.00000001709      3.49      4.00      3.25
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** LINE VOLUME Source ID = SLINE5
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SRCPARAM L0000728     0.00000006788      3.49      4.00      3.25
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   SRCPARAM L0000745     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000746     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000747     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000748     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000749     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000750     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000751     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000752     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000753     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000754     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000755     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000756     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000757     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000758     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000759     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000760     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000761     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000762     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000763     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000764     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000765     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000766     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000767     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000768     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000769     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000770     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000771     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000772     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000773     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000774     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000775     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000776     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000777     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000778     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000779     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000780     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000781     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000782     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000783     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000784     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000785     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000786     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000787     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000788     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000789     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000790     0.00000006788      3.49      4.00      3.25
   SRCPARAM L0000791     0.00000006788      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE6
   SRCPARAM L0000792     0.00000001114      3.49      6.51      3.25
```

```
   SRCPARAM L0000793     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000794     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000795     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000796     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000797     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000798     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000799     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000800     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000801     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000802     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000803     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000804     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000805     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000806     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000807     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000808     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000809     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000810     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000811     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000812     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000813     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000814     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000815     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000816     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000817     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000818     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000819     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000820     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000821     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000822     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000823     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000824     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000825     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000826     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000827     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000828     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000829     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000830     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000831     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000832     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000833     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000834     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000835     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000836     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000837     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000838     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000839     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000840     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000841     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000842     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000843     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000844     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000845     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000846     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000847     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000848     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000849     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000850     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000851     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000852     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000853     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000854     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000855     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000856     0.0000001114      3.49      6.51      3.25
   SRCPARAM L0000857     0.0000001114      3.49      6.51      3.25
** ----------------------------------------------------------------------
```

```
** LINE VOLUME Source ID = SLINE7
   SRCPARAM L0000858     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000859     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000860     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000861     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000862     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000863     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000864     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000865     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000866     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000867     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000868     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000869     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000870     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000871     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000872     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000873     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000874     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000875     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000876     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000877     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000878     0.0000001207      3.49      4.00      3.25
   SRCPARAM L0000879     0.0000001207      3.49      4.00      3.25
** ----------------------------------------------------------------
** LINE VOLUME Source ID = SLINE8
   SRCPARAM L0000880     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000881     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000882     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000883     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000884     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000885     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000886     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000887     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000888     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000889     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000890     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000891     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000892     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000893     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000894     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000895     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000896     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000897     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000898     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000899     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000900     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000901     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000902     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000903     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000904     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000905     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000906     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000907     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000908     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000909     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000910     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000911     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000912     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000913     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000914     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000915     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000916     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000917     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000918     0.0000001592      3.49      4.00      3.25
   SRCPARAM L0000919     0.0000001592      3.49      4.00      3.25
** ----------------------------------------------------------------
```

```
** LINE VOLUME Source ID = SLINE9
   SRCPARAM L0000920     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000921     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000922     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000923     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000924     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000925     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000926     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000927     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000928     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000929     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000930     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000931     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000932     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000933     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000934     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000935     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000936     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000937     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000938     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000939     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000940     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000941     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000942     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000943     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000944     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000945     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000946     0.000000007743      3.49      4.00      3.25
   SRCPARAM L0000947     0.000000007743      3.49      4.00      3.25
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE10
   SRCPARAM L0000948     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000949     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000950     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000951     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000952     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000953     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000954     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000955     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000956     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000957     0.00000003126      3.49      4.00      3.25
   SRCPARAM L0000958     0.00000003126      3.49      4.00      3.25
** ------------------------------------------------------------------
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   INCLUDED "14848 Ops.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC
   PROFFILE KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
   SURFDATA 23161 2015 DAGGETT/FAA_AIRPORT
   UAIRDATA 3120 2015
   PROFBASE 588.3 METERS
```

```
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL "14848 Ops.AD\AN00GALL.PLT" 31
   SUMMFILE "14848 Ops.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186    1122       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187    1122       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        12:16:34

                      PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: DPM
```

```
 **Model Calculates ANNUAL Averages Only

 **This Run Includes:    438 Source(s);       1 Source Group(s); and      39 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:    438 VOLUME source(s)
                 and:      0 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  19191

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing
                                                                 Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   588.30 ;  Decay Coef. =
 0.000     ;  Rot. Angle =     0.0
                Emission Units = GRAMS/SEC                              ;  Emission Rate
                Unit Factor =   0.10000E+07
                Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.7 MB of RAM.

 **Input Runstream File:
 aermod.inp
 **Output Print File:
 aermod.out

 **Detailed Error/Message File:   14848
 Ops.err
 **File for Summary of Results:   14848
 Ops.sum
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***        12:16:34

                      PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
   SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - -
```

```
L0000521         0   0.36550E-06  465141.7 3810605.3  1052.6     3.49     4.00     3.25
NO
L0000522         0   0.36550E-06  465150.3 3810605.3  1052.3     3.49     4.00     3.25
NO
L0000523         0   0.36550E-06  465158.9 3810605.3  1052.0     3.49     4.00     3.25
NO
L0000524         0   0.36550E-06  465167.5 3810605.3  1052.0     3.49     4.00     3.25
NO
L0000525         0   0.36550E-06  465176.0 3810605.3  1052.0     3.49     4.00     3.25
NO
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L0000527         0   0.36550E-06  465193.2 3810605.3  1051.9     3.49     4.00     3.25
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L0000532         0   0.36550E-06  465236.2 3810605.3  1051.2     3.49     4.00     3.25
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L0000550         0   0.36550E-06  465390.8 3810605.3  1049.1     3.49     4.00     3.25
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L0000551         0   0.36550E-06  465399.4 3810605.3  1049.0     3.49     4.00     3.25
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NO
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L0000554 0 0.36550E-06 465425.2 3810605.3 1048.5 3.49 4.00 3.25
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L0000556 0 0.36550E-06 465442.3 3810605.3 1048.2 3.49 4.00 3.25
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L0000557 0 0.36550E-06 465450.9 3810605.3 1048.1 3.49 4.00 3.25
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L0000558 0 0.36550E-06 465459.5 3810605.3 1048.0 3.49 4.00 3.25
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L0000559 0 0.36550E-06 465468.1 3810605.3 1048.0 3.49 4.00 3.25
NO
L0000560 0 0.36550E-06 465476.7 3810605.3 1048.0 3.49 4.00 3.25
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	SCALAR VARY BY
L0000561	0	0.33550E-08	464951.7	3810533.1	1056.0	3.49	4.00	3.25	NO
L0000562	0	0.33550E-08	464960.2	3810534.1	1055.9	3.49	4.00	3.25	NO
L0000563	0	0.33550E-08	464968.7	3810535.1	1055.8	3.49	4.00	3.25	NO
L0000564	0	0.33550E-08	464977.3	3810536.1	1055.7	3.49	4.00	3.25	NO
L0000565	0	0.33550E-08	464985.8	3810537.0	1055.5	3.49	4.00	3.25	NO
L0000566	0	0.33550E-08	464994.4	3810538.0	1055.3	3.49	4.00	3.25	NO
L0000567	0	0.33550E-08	465002.9	3810539.0	1055.1	3.49	4.00	3.25	NO
L0000568	0	0.33550E-08	465011.5	3810539.4	1055.0	3.49	4.00	3.25	NO
L0000569	0	0.33550E-08	465020.0	3810539.6	1054.7	3.49	4.00	3.25	NO
L0000570	0	0.33550E-08	465028.6	3810539.8	1054.4	3.49	4.00	3.25	NO
L0000571	0	0.33550E-08	465037.2	3810540.0	1054.1	3.49	4.00	3.25	NO
L0000572	0	0.33550E-08	465045.8	3810540.2	1054.0	3.49	4.00	3.25	NO
L0000573	0	0.33550E-08	465054.4	3810540.3	1054.0	3.49	4.00	3.25	NO
L0000574	0	0.33550E-08	465063.0	3810540.5	1054.0	3.49	4.00	3.25	NO
L0000575	0	0.33550E-08	465071.6	3810540.7	1054.0	3.49	4.00	3.25	NO
L0000576	0	0.17090E-07	465078.6	3810540.9	1054.0	3.49	4.00	3.25	NO

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 L0000577         0   0.17090E-07  465087.2 3810540.9  1054.0     3.49     4.00     3.25
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 L0000579         0   0.17090E-07  465104.3 3810540.7  1053.8     3.49     4.00     3.25
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 L0000581         0   0.17090E-07  465121.5 3810540.6  1053.3     3.49     4.00     3.25
 NO
 L0000582         0   0.17090E-07  465130.1 3810540.5  1053.0     3.49     4.00     3.25
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 L0000583         0   0.17090E-07  465138.7 3810540.5  1053.0     3.49     4.00     3.25
 NO
 L0000584         0   0.17090E-07  465147.3 3810540.4  1053.0     3.49     4.00     3.25
 NO
 L0000585         0   0.17090E-07  465155.9 3810540.3  1053.0     3.49     4.00     3.25
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 NO
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 NO
 L0000595         0   0.17090E-07  465241.8 3810539.6  1052.0     3.49     4.00     3.25
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 L0000597         0   0.17090E-07  465259.0 3810539.5  1051.9     3.49     4.00     3.25
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 L0000598         0   0.17090E-07  465267.5 3810539.4  1051.7     3.49     4.00     3.25
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 L0000599         0   0.17090E-07  465276.1 3810539.4  1051.6     3.49     4.00     3.25
 NO
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 NO
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       12:16:34

                     PAGE   4
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
   SOURCE      PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
   SOURCE  SCALAR VARY
     ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
     (METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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- - - - - - - - - - - - -

L0000601	0	0.17090E-07	465293.3	3810539.2	1051.3	3.49	4.00	3.25
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L0000602	0	0.17090E-07	465301.9	3810539.2	1051.1	3.49	4.00	3.25
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L0000603	0	0.17090E-07	465310.5	3810539.1	1051.0	3.49	4.00	3.25
NO								
L0000604	0	0.17090E-07	465319.1	3810539.0	1050.9	3.49	4.00	3.25
NO								
L0000605	0	0.17090E-07	465327.7	3810539.0	1050.7	3.49	4.00	3.25
NO								
L0000606	0	0.17090E-07	465336.3	3810538.9	1050.6	3.49	4.00	3.25
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L0000607	0	0.17090E-07	465344.8	3810538.8	1050.6	3.49	4.00	3.25
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L0000608	0	0.17090E-07	465353.4	3810538.8	1050.6	3.49	4.00	3.25
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L0000609	0	0.17090E-07	465362.0	3810538.7	1050.6	3.49	4.00	3.25
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L0000610	0	0.17090E-07	465370.6	3810538.6	1050.6	3.49	4.00	3.25
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L0000611	0	0.17090E-07	465379.2	3810538.6	1050.4	3.49	4.00	3.25
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L0000612	0	0.17090E-07	465387.8	3810538.5	1050.2	3.49	4.00	3.25
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L0000613	0	0.17090E-07	465396.4	3810538.5	1050.1	3.49	4.00	3.25
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L0000614	0	0.17090E-07	465405.0	3810538.5	1049.9	3.49	4.00	3.25
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L0000615	0	0.17090E-07	465413.6	3810538.6	1049.8	3.49	4.00	3.25
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L0000617	0	0.17090E-07	465430.7	3810538.7	1049.6	3.49	4.00	3.25
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L0000618	0	0.17090E-07	465439.3	3810538.8	1049.4	3.49	4.00	3.25
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L0000619	0	0.17090E-07	465447.9	3810538.9	1049.2	3.49	4.00	3.25
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L0000620	0	0.17090E-07	465456.5	3810538.9	1049.1	3.49	4.00	3.25
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L0000621	0	0.17090E-07	465465.1	3810539.0	1049.0	3.49	4.00	3.25
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L0000622	0	0.17090E-07	465473.7	3810539.1	1048.6	3.49	4.00	3.25
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L0000624	0	0.17090E-07	465490.7	3810541.5	1048.5	3.49	4.00	3.25
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L0000626	0	0.17090E-07	465507.6	3810544.3	1048.4	3.49	4.00	3.25
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L0000627	0	0.17090E-07	465516.1	3810545.8	1048.3	3.49	4.00	3.25
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L0000628	0	0.17090E-07	465524.6	3810547.2	1048.3	3.49	4.00	3.25
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L0000629	0	0.17090E-07	465532.9	3810549.3	1048.2	3.49	4.00	3.25
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L0000630	0	0.17090E-07	465541.1	3810551.8	1048.1	3.49	4.00	3.25
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L0000631	0	0.17090E-07	465549.3	3810554.2	1048.1	3.49	4.00	3.25
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L0000632	0	0.17090E-07	465557.6	3810556.6	1048.0	3.49	4.00	3.25
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L0000633 0 0.17090E-07 465565.8 3810559.0 1048.0 3.49 4.00 3.25
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L0000634 0 0.17090E-07 465574.1 3810561.4 1047.9 3.49 4.00 3.25
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L0000635 0 0.17090E-07 465582.3 3810563.9 1047.7 3.49 4.00 3.25
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L0000636 0 0.17090E-07 465590.1 3810567.3 1047.6 3.49 4.00 3.25
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L0000638 0 0.17090E-07 465605.6 3810574.9 1047.4 3.49 4.00 3.25
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L0000639 0 0.17090E-07 465613.3 3810578.7 1047.2 3.49 4.00 3.25
NO
L0000640 0 0.17090E-07 465621.0 3810582.4 1047.1 3.49 4.00 3.25
NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	SCALAR VARY BY
L0000641	0	0.17090E-07	465628.6	3810586.5	1047.0	3.49	4.00	3.25	NO
L0000642	0	0.17090E-07	465635.8	3810591.1	1046.8	3.49	4.00	3.25	NO
L0000643	0	0.17090E-07	465643.1	3810595.7	1046.6	3.49	4.00	3.25	NO
L0000644	0	0.17090E-07	465650.4	3810600.3	1046.3	3.49	4.00	3.25	NO
L0000645	0	0.67880E-07	465659.4	3810605.9	1046.1	3.49	4.00	3.25	NO
L0000646	0	0.67880E-07	465666.4	3810610.8	1046.0	3.49	4.00	3.25	NO
L0000647	0	0.67880E-07	465673.5	3810615.7	1046.0	3.49	4.00	3.25	NO
L0000648	0	0.67880E-07	465680.5	3810620.6	1045.8	3.49	4.00	3.25	NO
L0000649	0	0.67880E-07	465687.6	3810625.5	1045.7	3.49	4.00	3.25	NO
L0000650	0	0.67880E-07	465695.6	3810626.4	1045.7	3.49	4.00	3.25	NO
L0000651	0	0.67880E-07	465702.7	3810621.5	1045.7	3.49	4.00	3.25	NO
L0000652	0	0.67880E-07	465709.7	3810616.6	1045.7	3.49	4.00	3.25	NO
L0000653	0	0.67880E-07	465706.9	3810609.8	1045.8	3.49	4.00	3.25	NO
L0000654	0	0.67880E-07	465702.2	3810602.6	1046.0	3.49	4.00	3.25	NO
L0000655	0	0.67880E-07	465697.6	3810595.3	1046.0	3.49	4.00	3.25	NO

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 L0000656         0   0.67880E-07  465692.9 3810588.1  1046.0     3.49     4.00     3.25
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 L0000657         0   0.67880E-07  465688.3 3810580.9  1046.2     3.49     4.00     3.25
 NO
 L0000658         0   0.67880E-07  465683.6 3810573.7  1046.4     3.49     4.00     3.25
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 L0000659         0   0.67880E-07  465679.0 3810566.4  1046.7     3.49     4.00     3.25
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 L0000660         0   0.67880E-07  465674.3 3810559.2  1046.9     3.49     4.00     3.25
 NO
 L0000661         0   0.67880E-07  465669.7 3810552.0  1047.0     3.49     4.00     3.25
 NO
 L0000662         0   0.67880E-07  465665.1 3810544.8  1047.1     3.49     4.00     3.25
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 L0000663         0   0.67880E-07  465660.4 3810537.5  1047.2     3.49     4.00     3.25
 NO
 L0000664         0   0.67880E-07  465655.8 3810530.3  1047.4     3.49     4.00     3.25
 NO
 L0000665         0   0.67880E-07  465651.1 3810523.1  1047.7     3.49     4.00     3.25
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 L0000666         0   0.67880E-07  465646.5 3810515.9  1047.8     3.49     4.00     3.25
 NO
 L0000667         0   0.67880E-07  465641.8 3810508.6  1048.0     3.49     4.00     3.25
 NO
 L0000668         0   0.67880E-07  465637.2 3810501.4  1048.0     3.49     4.00     3.25
 NO
 L0000669         0   0.67880E-07  465632.5 3810494.2  1048.0     3.49     4.00     3.25
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 L0000670         0   0.67880E-07  465627.8 3810487.0  1048.0     3.49     4.00     3.25
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 NO
 L0000673         0   0.67880E-07  465613.7 3810465.4  1048.0     3.49     4.00     3.25
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 L0000675         0   0.67880E-07  465604.4 3810451.0  1048.1     3.49     4.00     3.25
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 NO
 L0000680         0   0.67880E-07  465580.9 3810415.0  1048.7     3.49     4.00     3.25
 NO
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       12:16:34

                     PAGE   6
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
  SOURCE       PART.  (GRAMS/SEC)     X         Y      ELEV.   HEIGHT      SY       SZ
  SOURCE  SCALAR VARY
    ID         CATS.              (METERS) (METERS) (METERS) (METERS) (METERS)
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(METERS) BY

L0000681	0	0.67880E-07	465576.2	3810407.8	1049.1	3.49	4.00	3.25
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NO								
L0000683	0	0.67880E-07	465566.8	3810393.4	1049.7	3.49	4.00	3.25
NO								
L0000684	0	0.67880E-07	465562.1	3810386.3	1049.9	3.49	4.00	3.25
NO								
L0000685	0	0.67880E-07	465557.5	3810379.1	1050.0	3.49	4.00	3.25
NO								
L0000686	0	0.67880E-07	465552.8	3810371.9	1050.1	3.49	4.00	3.25
NO								
L0000687	0	0.67880E-07	465548.1	3810364.7	1050.4	3.49	4.00	3.25
NO								
L0000688	0	0.67880E-07	465543.4	3810357.5	1050.8	3.49	4.00	3.25
NO								
L0000689	0	0.67880E-07	465538.7	3810350.3	1051.2	3.49	4.00	3.25
NO								
L0000690	0	0.67880E-07	465534.0	3810343.1	1051.6	3.49	4.00	3.25
NO								
L0000691	0	0.67880E-07	465529.3	3810335.9	1051.8	3.49	4.00	3.25
NO								
L0000692	0	0.67880E-07	465524.6	3810328.7	1051.9	3.49	4.00	3.25
NO								
L0000693	0	0.67880E-07	465519.9	3810321.5	1052.0	3.49	4.00	3.25
NO								
L0000694	0	0.67880E-07	465515.3	3810314.3	1052.0	3.49	4.00	3.25
NO								
L0000695	0	0.67880E-07	465510.6	3810307.1	1052.1	3.49	4.00	3.25
NO								
L0000696	0	0.67880E-07	465505.9	3810299.9	1052.2	3.49	4.00	3.25
NO								
L0000697	0	0.67880E-07	465501.2	3810292.7	1052.5	3.49	4.00	3.25
NO								
L0000698	0	0.67880E-07	465496.5	3810285.5	1052.8	3.49	4.00	3.25
NO								
L0000699	0	0.67880E-07	465491.8	3810278.3	1053.0	3.49	4.00	3.25
NO								
L0000700	0	0.67880E-07	465487.1	3810271.1	1053.0	3.49	4.00	3.25
NO								
L0000701	0	0.67880E-07	465482.5	3810263.9	1053.0	3.49	4.00	3.25
NO								
L0000702	0	0.67880E-07	465477.8	3810256.7	1053.0	3.49	4.00	3.25
NO								
L0000703	0	0.67880E-07	465473.1	3810249.5	1053.2	3.49	4.00	3.25
NO								
L0000704	0	0.67880E-07	465468.4	3810242.3	1053.5	3.49	4.00	3.25
NO								
L0000705	0	0.67880E-07	465463.7	3810235.1	1053.7	3.49	4.00	3.25
NO								
L0000706	0	0.67880E-07	465459.1	3810227.9	1053.9	3.49	4.00	3.25
NO								
L0000707	0	0.67880E-07	465454.4	3810220.7	1054.0	3.49	4.00	3.25
NO								
L0000708	0	0.67880E-07	465449.7	3810213.5	1054.0	3.49	4.00	3.25
NO								
L0000709	0	0.67880E-07	465445.0	3810206.3	1054.0	3.49	4.00	3.25
NO								
L0000710	0	0.67880E-07	465440.4	3810199.0	1054.0	3.49	4.00	3.25
NO								
L0000711	0	0.67880E-07	465435.7	3810191.8	1054.1	3.49	4.00	3.25
NO								

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 L0000712         0   0.67880E-07  465431.0 3810184.6  1054.4     3.49     4.00     3.25
 NO
 L0000713         0   0.67880E-07  465426.3 3810177.4  1054.6     3.49     4.00     3.25
 NO
 L0000714         0   0.67880E-07  465421.6 3810170.2  1054.9     3.49     4.00     3.25
 NO
 L0000715         0   0.67880E-07  465417.0 3810163.0  1055.0     3.49     4.00     3.25
 NO
 L0000716         0   0.67880E-07  465412.3 3810155.8  1055.2     3.49     4.00     3.25
 NO
 L0000717         0   0.67880E-07  465407.6 3810148.6  1055.4     3.49     4.00     3.25
 NO
 L0000718         0   0.67880E-07  465402.9 3810141.4  1055.7     3.49     4.00     3.25
 NO
 L0000719         0   0.67880E-07  465398.2 3810134.2  1056.0     3.49     4.00     3.25
 NO
 L0000720         0   0.67880E-07  465393.6 3810127.0  1056.0     3.49     4.00     3.25
 NO
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       12:16:34

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
  SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
  SOURCE  SCALAR VARY
    ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)             BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - -

 L0000721         0   0.67880E-07  465388.9 3810119.8  1056.0     3.49     4.00     3.25
 NO
 L0000722         0   0.67880E-07  465384.2 3810112.6  1056.0     3.49     4.00     3.25
 NO
 L0000723         0   0.67880E-07  465379.5 3810105.4  1056.0     3.49     4.00     3.25
 NO
 L0000724         0   0.67880E-07  465374.9 3810098.2  1056.2     3.49     4.00     3.25
 NO
 L0000725         0   0.67880E-07  465370.2 3810091.0  1056.5     3.49     4.00     3.25
 NO
 L0000726         0   0.67880E-07  465365.5 3810083.8  1056.7     3.49     4.00     3.25
 NO
 L0000727         0   0.67880E-07  465360.8 3810076.6  1057.0     3.49     4.00     3.25
 NO
 L0000728         0   0.67880E-07  465356.1 3810069.4  1057.0     3.49     4.00     3.25
 NO
 L0000729         0   0.67880E-07  465351.5 3810062.2  1057.0     3.49     4.00     3.25
 NO
 L0000730         0   0.67880E-07  465346.8 3810055.0  1057.0     3.49     4.00     3.25
 NO
 L0000731         0   0.67880E-07  465342.1 3810047.8  1057.0     3.49     4.00     3.25
 NO
 L0000732         0   0.67880E-07  465337.4 3810040.6  1057.2     3.49     4.00     3.25
 NO
 L0000733         0   0.67880E-07  465332.8 3810033.3  1057.6     3.49     4.00     3.25
 NO
 L0000734         0   0.67880E-07  465328.0 3810026.2  1057.8     3.49     4.00     3.25
 NO
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 L0000735         0   0.67880E-07  465323.1 3810019.1  1058.0     3.49     4.00     3.25
 NO
 L0000736         0   0.67880E-07  465318.3 3810012.0  1058.0     3.49     4.00     3.25
 NO
 L0000737         0   0.67880E-07  465313.5 3810004.9  1058.0     3.49     4.00     3.25
 NO
 L0000738         0   0.67880E-07  465308.7 3809997.7  1058.0     3.49     4.00     3.25
 NO
 L0000739         0   0.67880E-07  465303.9 3809990.6  1058.2     3.49     4.00     3.25
 NO
 L0000740         0   0.67880E-07  465299.1 3809983.5  1058.4     3.49     4.00     3.25
 NO
 L0000741         0   0.67880E-07  465294.3 3809976.4  1058.7     3.49     4.00     3.25
 NO
 L0000742         0   0.67880E-07  465289.5 3809969.2  1058.9     3.49     4.00     3.25
 NO
 L0000743         0   0.67880E-07  465284.7 3809962.1  1059.0     3.49     4.00     3.25
 NO
 L0000744         0   0.67880E-07  465279.9 3809955.0  1059.0     3.49     4.00     3.25
 NO
 L0000745         0   0.67880E-07  465275.1 3809947.9  1059.4     3.49     4.00     3.25
 NO
 L0000746         0   0.67880E-07  465270.3 3809940.8  1059.7     3.49     4.00     3.25
 NO
 L0000747         0   0.67880E-07  465265.5 3809933.6  1059.9     3.49     4.00     3.25
 NO
 L0000748         0   0.67880E-07  465260.7 3809926.5  1060.0     3.49     4.00     3.25
 NO
 L0000749         0   0.67880E-07  465255.9 3809919.4  1060.2     3.49     4.00     3.25
 NO
 L0000750         0   0.67880E-07  465251.1 3809912.3  1060.4     3.49     4.00     3.25
 NO
 L0000751         0   0.67880E-07  465246.3 3809905.1  1060.6     3.49     4.00     3.25
 NO
 L0000752         0   0.67880E-07  465241.5 3809898.0  1060.7     3.49     4.00     3.25
 NO
 L0000753         0   0.67880E-07  465236.7 3809890.9  1060.6     3.49     4.00     3.25
 NO
 L0000754         0   0.67880E-07  465231.9 3809883.8  1060.6     3.49     4.00     3.25
 NO
 L0000755         0   0.67880E-07  465226.6 3809877.0  1060.7     3.49     4.00     3.25
 NO
 L0000756         0   0.67880E-07  465221.0 3809870.5  1060.8     3.49     4.00     3.25
 NO
 L0000757         0   0.67880E-07  465215.4 3809864.0  1061.1     3.49     4.00     3.25
 NO
 L0000758         0   0.67880E-07  465209.8 3809857.5  1061.3     3.49     4.00     3.25
 NO
 L0000759         0   0.67880E-07  465204.2 3809851.0  1061.5     3.49     4.00     3.25
 NO
 L0000760         0   0.67880E-07  465198.6 3809844.5  1061.7     3.49     4.00     3.25
 NO
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
  SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
```

SOURCE ID	SCALAR CATS.	VARY BY	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)
L0000761	0	0.67880E-07	465193.0	3809838.0	1061.9	3.49	4.00	3.25
NO								
L0000762	0	0.67880E-07	465186.9	3809831.9	1062.0	3.49	4.00	3.25
NO								
L0000763	0	0.67880E-07	465180.0	3809826.9	1062.0	3.49	4.00	3.25
NO								
L0000764	0	0.67880E-07	465173.1	3809821.8	1062.0	3.49	4.00	3.25
NO								
L0000765	0	0.67880E-07	465165.8	3809817.2	1062.0	3.49	4.00	3.25
NO								
L0000766	0	0.67880E-07	465158.1	3809813.4	1062.0	3.49	4.00	3.25
NO								
L0000767	0	0.67880E-07	465150.4	3809809.6	1062.3	3.49	4.00	3.25
NO								
L0000768	0	0.67880E-07	465142.7	3809805.8	1062.6	3.49	4.00	3.25
NO								
L0000769	0	0.67880E-07	465134.8	3809802.6	1062.9	3.49	4.00	3.25
NO								
L0000770	0	0.67880E-07	465126.8	3809799.4	1063.0	3.49	4.00	3.25
NO								
L0000771	0	0.67880E-07	465118.8	3809796.3	1063.1	3.49	4.00	3.25
NO								
L0000772	0	0.67880E-07	465110.5	3809794.2	1063.2	3.49	4.00	3.25
NO								
L0000773	0	0.67880E-07	465102.0	3809792.6	1063.4	3.49	4.00	3.25
NO								
L0000774	0	0.67880E-07	465093.6	3809790.9	1063.5	3.49	4.00	3.25
NO								
L0000775	0	0.67880E-07	465085.0	3809790.7	1063.5	3.49	4.00	3.25
NO								
L0000776	0	0.67880E-07	465076.5	3809790.6	1063.5	3.49	4.00	3.25
NO								
L0000777	0	0.67880E-07	465067.9	3809790.5	1063.5	3.49	4.00	3.25
NO								
L0000778	0	0.67880E-07	465059.3	3809790.3	1063.5	3.49	4.00	3.25
NO								
L0000779	0	0.67880E-07	465050.7	3809790.2	1063.5	3.49	4.00	3.25
NO								
L0000780	0	0.67880E-07	465042.1	3809790.1	1063.5	3.49	4.00	3.25
NO								
L0000781	0	0.67880E-07	465033.5	3809790.0	1063.6	3.49	4.00	3.25
NO								
L0000782	0	0.67880E-07	465024.9	3809789.9	1063.8	3.49	4.00	3.25
NO								
L0000783	0	0.67880E-07	465016.3	3809790.1	1063.9	3.49	4.00	3.25
NO								
L0000784	0	0.67880E-07	465007.7	3809790.4	1064.0	3.49	4.00	3.25
NO								
L0000785	0	0.67880E-07	464999.2	3809790.6	1064.0	3.49	4.00	3.25
NO								
L0000786	0	0.67880E-07	464990.6	3809790.9	1064.0	3.49	4.00	3.25
NO								
L0000787	0	0.67880E-07	464982.0	3809791.2	1064.0	3.49	4.00	3.25
NO								
L0000788	0	0.67880E-07	464973.4	3809791.5	1064.0	3.49	4.00	3.25
NO								
L0000789	0	0.67880E-07	464964.8	3809791.8	1064.0	3.49	4.00	3.25
NO								
L0000790	0	0.67880E-07	464956.2	3809792.0	1064.0	3.49	4.00	3.25
NO								

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 L0000791         0   0.67880E-07  464947.6 3809792.3  1064.0     3.49     4.00     3.25
 NO
 L0000792         0   0.11140E-06  464939.9 3809792.7  1064.1     3.49     6.51     3.25
 NO
 L0000793         0   0.11140E-06  464925.9 3809792.6  1064.4     3.49     6.51     3.25
 NO
 L0000794         0   0.11140E-06  464911.9 3809792.6  1064.6     3.49     6.51     3.25
 NO
 L0000795         0   0.11140E-06  464897.9 3809792.6  1064.8     3.49     6.51     3.25
 NO
 L0000796         0   0.11140E-06  464883.9 3809792.6  1065.0     3.49     6.51     3.25
 NO
 L0000797         0   0.11140E-06  464869.9 3809792.6  1065.0     3.49     6.51     3.25
 NO
 L0000798         0   0.11140E-06  464855.9 3809792.5  1065.1     3.49     6.51     3.25
 NO
 L0000799         0   0.11140E-06  464841.9 3809792.5  1065.3     3.49     6.51     3.25
 NO
 L0000800         0   0.11140E-06  464827.9 3809792.5  1065.5     3.49     6.51     3.25
 NO
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       12:16:34

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                  *** VOLUME SOURCE DATA ***

              NUMBER EMISSION RATE                    BASE    RELEASE    INIT.    INIT.
              URBAN  EMISSION RATE
  SOURCE       PART.  (GRAMS/SEC)     X        Y      ELEV.   HEIGHT      SY       SZ
  SOURCE  SCALAR VARY
    ID         CATS.               (METERS) (METERS) (METERS) (METERS) (METERS)
    (METERS)              BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - -

 L0000801         0   0.11140E-06  464813.9 3809792.5  1065.7     3.49     6.51     3.25
 NO
 L0000802         0   0.11140E-06  464799.9 3809792.4  1066.0     3.49     6.51     3.25
 NO
 L0000803         0   0.11140E-06  464785.9 3809792.4  1066.0     3.49     6.51     3.25
 NO
 L0000804         0   0.11140E-06  464771.9 3809792.4  1066.0     3.49     6.51     3.25
 NO
 L0000805         0   0.11140E-06  464757.9 3809792.4  1066.2     3.49     6.51     3.25
 NO
 L0000806         0   0.11140E-06  464743.9 3809792.4  1066.4     3.49     6.51     3.25
 NO
 L0000807         0   0.11140E-06  464736.8 3809785.5  1066.7     3.49     6.51     3.25
 NO
 L0000808         0   0.11140E-06  464736.8 3809771.5  1067.0     3.49     6.51     3.25
 NO
 L0000809         0   0.11140E-06  464736.8 3809757.5  1067.0     3.49     6.51     3.25
 NO
 L0000810         0   0.11140E-06  464736.9 3809743.5  1067.0     3.49     6.51     3.25
 NO
 L0000811         0   0.11140E-06  464736.9 3809729.5  1067.1     3.49     6.51     3.25
 NO
 L0000812         0   0.11140E-06  464736.9 3809715.5  1067.1     3.49     6.51     3.25
 NO
 L0000813         0   0.11140E-06  464736.9 3809701.5  1067.5     3.49     6.51     3.25
 NO
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L0000814	0	0.11140E-06	464736.9	3809687.5	1068.0	3.49	6.51	3.25	NO
L0000815	0	0.11140E-06	464737.0	3809673.5	1068.0	3.49	6.51	3.25	NO
L0000816	0	0.11140E-06	464737.0	3809659.5	1068.0	3.49	6.51	3.25	NO
L0000817	0	0.11140E-06	464737.0	3809645.5	1068.3	3.49	6.51	3.25	NO
L0000818	0	0.11140E-06	464737.0	3809631.5	1068.8	3.49	6.51	3.25	NO
L0000819	0	0.11140E-06	464737.0	3809617.5	1069.0	3.49	6.51	3.25	NO
L0000820	0	0.11140E-06	464737.0	3809603.5	1069.1	3.49	6.51	3.25	NO
L0000821	0	0.11140E-06	464737.1	3809589.5	1069.3	3.49	6.51	3.25	NO
L0000822	0	0.11140E-06	464737.1	3809575.5	1069.7	3.49	6.51	3.25	NO
L0000823	0	0.11140E-06	464737.1	3809561.5	1070.0	3.49	6.51	3.25	NO
L0000824	0	0.11140E-06	464737.1	3809547.5	1070.0	3.49	6.51	3.25	NO
L0000825	0	0.11140E-06	464737.5	3809533.9	1070.0	3.49	6.51	3.25	NO
L0000826	0	0.11140E-06	464751.5	3809534.1	1070.0	3.49	6.51	3.25	NO
L0000827	0	0.11140E-06	464765.5	3809534.3	1070.0	3.49	6.51	3.25	NO
L0000828	0	0.11140E-06	464779.5	3809534.5	1070.0	3.49	6.51	3.25	NO
L0000829	0	0.11140E-06	464793.5	3809534.7	1070.0	3.49	6.51	3.25	NO
L0000830	0	0.11140E-06	464807.5	3809534.9	1069.8	3.49	6.51	3.25	NO
L0000831	0	0.11140E-06	464821.5	3809535.2	1069.3	3.49	6.51	3.25	NO
L0000832	0	0.11140E-06	464835.5	3809535.4	1069.0	3.49	6.51	3.25	NO
L0000833	0	0.11140E-06	464849.5	3809536.0	1069.0	3.49	6.51	3.25	NO
L0000834	0	0.11140E-06	464863.5	3809536.7	1069.0	3.49	6.51	3.25	NO
L0000835	0	0.11140E-06	464877.5	3809537.5	1069.0	3.49	6.51	3.25	NO
L0000836	0	0.11140E-06	464891.4	3809538.3	1068.9	3.49	6.51	3.25	NO
L0000837	0	0.11140E-06	464905.4	3809539.0	1068.9	3.49	6.51	3.25	NO
L0000838	0	0.11140E-06	464919.4	3809539.8	1068.9	3.49	6.51	3.25	NO
L0000839	0	0.11140E-06	464933.4	3809540.6	1068.5	3.49	6.51	3.25	NO
L0000840	0	0.11140E-06	464947.4	3809541.4	1068.1	3.49	6.51	3.25	NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

NUMBER EMISSION RATE BASE RELEASE INIT. INIT.

SOURCE ID	URBAN SOURCE	EMISSION RATE PART. (GRAMS/SEC)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)	SZ (METERS)	SCALAR VARY BY CATS.
L0000841	0	0.11140E-06	464961.4	3809541.8	1068.0	3.49	6.51	3.25	NO
L0000842	0	0.11140E-06	464975.4	3809541.9	1068.0	3.49	6.51	3.25	NO
L0000843	0	0.11140E-06	464989.4	3809542.1	1068.0	3.49	6.51	3.25	NO
L0000844	0	0.11140E-06	465003.3	3809542.2	1068.0	3.49	6.51	3.25	NO
L0000845	0	0.11140E-06	465017.3	3809542.5	1068.0	3.49	6.51	3.25	NO
L0000846	0	0.11140E-06	465031.3	3809542.8	1068.0	3.49	6.51	3.25	NO
L0000847	0	0.11140E-06	465045.3	3809543.1	1068.0	3.49	6.51	3.25	NO
L0000848	0	0.11140E-06	465059.3	3809543.4	1067.8	3.49	6.51	3.25	NO
L0000849	0	0.11140E-06	465073.3	3809543.4	1067.8	3.49	6.51	3.25	NO
L0000850	0	0.11140E-06	465087.3	3809543.0	1067.8	3.49	6.51	3.25	NO
L0000851	0	0.11140E-06	465101.3	3809542.6	1067.8	3.49	6.51	3.25	NO
L0000852	0	0.11140E-06	465115.3	3809542.2	1067.8	3.49	6.51	3.25	NO
L0000853	0	0.11140E-06	465129.3	3809541.8	1067.8	3.49	6.51	3.25	NO
L0000854	0	0.11140E-06	465143.3	3809541.4	1067.8	3.49	6.51	3.25	NO
L0000855	0	0.11140E-06	465157.3	3809540.6	1067.8	3.49	6.51	3.25	NO
L0000856	0	0.11140E-06	465171.3	3809539.8	1067.5	3.49	6.51	3.25	NO
L0000857	0	0.11140E-06	465185.2	3809539.0	1067.1	3.49	6.51	3.25	NO
L0000858	0	0.12070E-06	465643.2	3810619.0	1046.0	3.49	4.00	3.25	NO
L0000859	0	0.12070E-06	465637.6	3810625.5	1046.0	3.49	4.00	3.25	NO
L0000860	0	0.12070E-06	465632.0	3810632.0	1046.0	3.49	4.00	3.25	NO
L0000861	0	0.12070E-06	465626.4	3810638.6	1046.0	3.49	4.00	3.25	NO
L0000862	0	0.12070E-06	465619.8	3810636.7	1046.0	3.49	4.00	3.25	NO
L0000863	0	0.12070E-06	465612.9	3810631.6	1046.0	3.49	4.00	3.25	NO
L0000864	0	0.12070E-06	465606.0	3810626.5	1046.1	3.49	4.00	3.25	NO
L0000865	0	0.12070E-06	465599.1	3810621.4	1046.3	3.49	4.00	3.25	NO
L0000866	0	0.12070E-06	465592.2	3810616.3	1046.6	3.49	4.00	3.25	NO
L0000867	0	0.12070E-06	465585.2	3810611.3	1046.8	3.49	4.00	3.25	NO
L0000868	0	0.12070E-06	465578.0	3810606.6	1047.0	3.49	4.00	3.25	NO
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L0000879 0 0.12070E-06 465489.3 3810584.7 1048.0 3.49 4.00 3.25
NO
L0000880 0 0.15920E-06 465140.4 3810585.5 1052.7 3.49 4.00 3.25
NO

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE PART.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ
L0000881	0	0.15920E-06	465149.0	3810585.5	1052.4	3.49	4.00	3.25
NO								
L0000882	0	0.15920E-06	465157.6	3810585.5	1052.1	3.49	4.00	3.25
NO								
L0000883	0	0.15920E-06	465166.2	3810585.4	1052.0	3.49	4.00	3.25
NO								
L0000884	0	0.15920E-06	465174.8	3810585.4	1052.0	3.49	4.00	3.25
NO								
L0000885	0	0.15920E-06	465183.3	3810585.4	1052.0	3.49	4.00	3.25
NO								
L0000886	0	0.15920E-06	465191.9	3810585.4	1052.0	3.49	4.00	3.25
NO								
L0000887	0	0.15920E-06	465200.5	3810585.4	1052.0	3.49	4.00	3.25
NO								
L0000888	0	0.15920E-06	465209.1	3810585.3	1052.0	3.49	4.00	3.25
NO								
L0000889	0	0.15920E-06	465217.7	3810585.3	1052.0	3.49	4.00	3.25
NO								
L0000890	0	0.15920E-06	465226.3	3810585.3	1051.8	3.49	4.00	3.25
NO								
L0000891	0	0.15920E-06	465234.9	3810585.3	1051.5	3.49	4.00	3.25
NO								
L0000892	0	0.15920E-06	465243.5	3810585.2	1051.2	3.49	4.00	3.25
NO								

L0000893	0	0.15920E-06	465252.1	3810585.2	1051.0	3.49	4.00	3.25
NO								
L0000894	0	0.15920E-06	465260.7	3810585.2	1051.0	3.49	4.00	3.25
NO								
L0000895	0	0.15920E-06	465269.2	3810585.2	1051.0	3.49	4.00	3.25
NO								
L0000896	0	0.15920E-06	465277.8	3810585.2	1051.0	3.49	4.00	3.25
NO								
L0000897	0	0.15920E-06	465286.4	3810585.1	1050.8	3.49	4.00	3.25
NO								
L0000898	0	0.15920E-06	465295.0	3810585.1	1050.5	3.49	4.00	3.25
NO								
L0000899	0	0.15920E-06	465303.6	3810585.1	1050.2	3.49	4.00	3.25
NO								
L0000900	0	0.15920E-06	465312.2	3810585.1	1050.0	3.49	4.00	3.25
NO								
L0000901	0	0.15920E-06	465320.8	3810585.1	1050.0	3.49	4.00	3.25
NO								
L0000902	0	0.15920E-06	465329.4	3810585.0	1050.0	3.49	4.00	3.25
NO								
L0000903	0	0.15920E-06	465338.0	3810585.0	1050.0	3.49	4.00	3.25
NO								
L0000904	0	0.15920E-06	465346.6	3810585.0	1050.0	3.49	4.00	3.25
NO								
L0000905	0	0.15920E-06	465355.1	3810585.0	1050.0	3.49	4.00	3.25
NO								
L0000906	0	0.15920E-06	465363.7	3810584.9	1050.0	3.49	4.00	3.25
NO								
L0000907	0	0.15920E-06	465372.3	3810584.9	1049.9	3.49	4.00	3.25
NO								
L0000908	0	0.15920E-06	465380.9	3810584.9	1049.6	3.49	4.00	3.25
NO								
L0000909	0	0.15920E-06	465389.5	3810584.9	1049.4	3.49	4.00	3.25
NO								
L0000910	0	0.15920E-06	465398.1	3810584.9	1049.1	3.49	4.00	3.25
NO								
L0000911	0	0.15920E-06	465406.7	3810584.8	1049.0	3.49	4.00	3.25
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L0000912	0	0.15920E-06	465415.3	3810584.8	1049.0	3.49	4.00	3.25
NO								
L0000913	0	0.15920E-06	465423.9	3810584.8	1049.0	3.49	4.00	3.25
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L0000914	0	0.15920E-06	465432.5	3810584.8	1048.9	3.49	4.00	3.25
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L0000915	0	0.15920E-06	465441.0	3810584.8	1048.6	3.49	4.00	3.25
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L0000916	0	0.15920E-06	465449.6	3810584.7	1048.4	3.49	4.00	3.25
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L0000917	0	0.15920E-06	465458.2	3810584.7	1048.1	3.49	4.00	3.25
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L0000918	0	0.15920E-06	465466.8	3810584.7	1048.0	3.49	4.00	3.25
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L0000919	0	0.15920E-06	465475.4	3810584.7	1048.0	3.49	4.00	3.25
NO								
L0000920	0	0.77430E-08	465130.9	3810585.5	1053.0	3.49	4.00	3.25
NO								

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER URBAN SOURCE SCALAR VARY BY	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	
L0000921	0	0.77430E-08	465122.3	3810585.6	1053.0	3.49	4.00	3.25	NO
L0000922	0	0.77430E-08	465113.8	3810585.7	1053.0	3.49	4.00	3.25	NO
L0000923	0	0.77430E-08	465105.2	3810585.7	1053.0	3.49	4.00	3.25	NO
L0000924	0	0.77430E-08	465096.6	3810585.8	1053.1	3.49	4.00	3.25	NO
L0000925	0	0.77430E-08	465088.0	3810585.8	1053.4	3.49	4.00	3.25	NO
L0000926	0	0.77430E-08	465079.4	3810585.9	1053.7	3.49	4.00	3.25	NO
L0000927	0	0.77430E-08	465070.8	3810585.9	1054.0	3.49	4.00	3.25	NO
L0000928	0	0.77430E-08	465062.2	3810586.0	1054.0	3.49	4.00	3.25	NO
L0000929	0	0.77430E-08	465053.6	3810586.1	1054.0	3.49	4.00	3.25	NO
L0000930	0	0.77430E-08	465045.0	3810586.1	1054.0	3.49	4.00	3.25	NO
L0000931	0	0.77430E-08	465036.5	3810586.2	1054.1	3.49	4.00	3.25	NO
L0000932	0	0.77430E-08	465027.9	3810586.2	1054.4	3.49	4.00	3.25	NO
L0000933	0	0.77430E-08	465019.3	3810586.3	1054.7	3.49	4.00	3.25	NO
L0000934	0	0.77430E-08	465010.7	3810586.3	1055.0	3.49	4.00	3.25	NO
L0000935	0	0.77430E-08	465002.1	3810586.4	1055.0	3.49	4.00	3.25	NO
L0000936	0	0.77430E-08	464993.5	3810586.5	1055.0	3.49	4.00	3.25	NO
L0000937	0	0.77430E-08	464984.9	3810586.5	1055.0	3.49	4.00	3.25	NO
L0000938	0	0.77430E-08	464976.3	3810586.6	1055.0	3.49	4.00	3.25	NO
L0000939	0	0.77430E-08	464967.7	3810586.6	1055.0	3.49	4.00	3.25	NO
L0000940	0	0.77430E-08	464959.1	3810586.7	1055.0	3.49	4.00	3.25	NO
L0000941	0	0.77430E-08	464950.6	3810586.8	1055.0	3.49	4.00	3.25	NO
L0000942	0	0.77430E-08	464942.0	3810586.8	1055.3	3.49	4.00	3.25	NO
L0000943	0	0.77430E-08	464941.9	3810578.5	1055.5	3.49	4.00	3.25	NO
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L0000945	0	0.77430E-08	464942.4	3810561.4	1055.9	3.49	4.00	3.25	NO
L0000946	0	0.77430E-08	464943.9	3810553.0	1056.0	3.49	4.00	3.25	NO
L0000947	0	0.77430E-08	464946.3	3810544.7	1056.0	3.49	4.00	3.25	NO
L0000948	0	0.31260E-07	465073.8	3810558.3	1054.0	3.49	4.00	3.25	NO

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FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       12:16:34

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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                          SOURCE IDs
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FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       12:16:34

                     PAGE  14
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                        *** SOURCE IDs DEFINING SOURCE GROUPS ***

 SRCGROUP ID                                    SOURCE IDs
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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          L0000913    , L0000914    , L0000915    , L0000916    , L0000917    , L0000918    ,
          L0000919    , L0000920    ,

          L0000921    , L0000922    , L0000923    , L0000924    , L0000925    , L0000926    ,
          L0000927    , L0000928    ,

          L0000929    , L0000930    , L0000931    , L0000932    , L0000933    , L0000934    ,
          L0000935    , L0000936    ,

          L0000937    , L0000938    , L0000939    , L0000940    , L0000941    , L0000942    ,
          L0000943    , L0000944    ,

          L0000945    , L0000946    , L0000947    , L0000948    , L0000949    , L0000950    ,
          L0000951    , L0000952    ,

          L0000953    , L0000954    , L0000955    , L0000956    , L0000957    , L0000958    ,
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                  ***       12:16:34

                      PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                        *** DISCRETE CARTESIAN RECEPTORS ***
                                    (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
                                              (METERS)

    ( 464506.9, 3810141.6,    1063.0,    1063.0,       0.0);        ( 465481.2, 3810503.5,
    1049.8,    1049.8,       0.0);
    ( 465406.4, 3810503.0,    1050.6,    1050.6,       0.0);        ( 465212.7, 3810456.2,
    1053.0,    1053.0,       0.0);
    ( 464952.4, 3810455.7,    1056.0,    1056.0,       0.0);        ( 465964.7, 3810432.9,
    1048.0,    1048.0,       0.0);
    ( 465963.2, 3810384.6,    1048.2,    1048.2,       0.0);        ( 465974.5, 3810476.1,
    1047.0,    1047.0,       0.0);
    ( 466001.9, 3810516.5,    1046.0,    1046.0,       0.0);        ( 466028.4, 3810558.2,
    1044.9,    1044.9,       0.0);
    ( 466054.6, 3810598.8,    1044.0,    1044.0,       0.0);        ( 466136.4, 3810670.0,
    1042.0,    1042.0,       0.0);
    ( 466136.4, 3810635.9,    1042.1,    1042.1,       0.0);        ( 466074.3, 3810786.8,
    1040.2,    1040.2,       0.0);
    ( 465468.5, 3810751.9,    1045.5,    1045.5,       0.0);        ( 465266.0, 3810753.5,
    1049.2,    1049.2,       0.0);
    ( 465112.4, 3810808.1,    1050.6,    1050.6,       0.0);        ( 465314.5, 3810854.3,
    1047.0,    1047.0,       0.0);
    ( 465221.8, 3810854.6,    1048.9,    1048.9,       0.0);        ( 463382.5, 3811176.2,
    1061.1,    1061.1,       0.0);
    ( 463250.8, 3811177.8,    1062.2,    1062.2,       0.0);        ( 463278.3, 3810876.7,
    1065.2,    1065.2,       0.0);
    ( 465601.6, 3810943.3,    1041.0,    1041.0,       0.0);        ( 464507.2, 3809995.0,
    1066.5,    1066.5,       0.0);
    ( 464508.1, 3809810.8,    1068.8,    1068.8,       0.0);        ( 464509.8, 3809672.1,
    1070.3,    1070.3,       0.0);
```

```
    ( 464700.5, 3809701.5,    1068.0,    1068.0,       0.0);         ( 464701.3, 3809618.0,
    1069.3,    1069.3,       0.0);
    ( 464755.4, 3809565.3,    1069.5,    1069.5,       0.0);         ( 465246.9, 3809566.2,
    1067.0,    1067.0,       0.0);
    ( 464785.6, 3809489.1,    1070.3,    1070.3,       0.0);         ( 464694.0, 3809505.2,
    1071.0,    1071.0,       0.0);
    ( 464989.3, 3810696.8,    1054.0,    1054.0,       0.0);         ( 467840.7, 3810027.9,
    1029.9,    1029.9,       0.0);
    ( 467774.0, 3809972.0,    1031.9,    1031.9,       0.0);         ( 467765.1, 3810268.7,
    1027.6,    1027.6,       0.0);
    ( 467360.5, 3810321.9,    1033.9,    1033.9,       0.0);         ( 467361.2, 3810282.3,
    1034.7,    1034.7,       0.0);
    ( 467962.7, 3811258.2,    1013.3,    1013.3,
    0.0);
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       12:16:34

                     PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                        *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                                    (1=YES; 0=NO)

          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

              NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS
              INCLUDED IN THE DATA FILE.



                                  *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES
                                  ***
                                                      (METERS/SEC)

                                                1.54,   3.09,   5.14,   8.23,  10.80,
FF *** AERMOD - VERSION 22112  ***   *** C:\Users\Michael Tirohn\Desktop\HRAs\14848 Palmetto
Industrial\14848 ***        09/19/22
 *** AERMET - VERSION  19191 ***
 ***                                                                    ***       12:16:34

                     PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                    *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

   Surface file:
   KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.SFC                          Met
   Version:  19191
   Profile file:
   KDAG_723815_23161\KDAG_2015_2016_2018-2020_ADJU.PFL
```

Surface format:
FREE

Profile format:
FREE

Surface station no.: 23161 Upper air station no.: 3120
Name: DAGGETT/FAA_AIRPORT Name:
UNKNOWN
Year: 2015 Year: 2015

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
15	01	01	1	01	-24.9	0.256	-9.000	-9.000	-999.	311.	72.1	0.02	4.18	1.00	4.27	251.	10.0	272.5	2.0
15	01	01	1	02	-24.3	0.250	-9.000	-9.000	-999.	300.	68.6	0.02	4.18	1.00	4.17	240.	10.0	272.5	2.0
15	01	01	1	03	-28.4	0.292	-9.000	-9.000	-999.	379.	94.0	0.02	4.18	1.00	4.85	255.	10.0	273.1	2.0
15	01	01	1	04	-26.1	0.266	-9.000	-9.000	-999.	329.	77.8	0.02	4.18	1.00	4.51	274.	10.0	270.4	2.0
15	01	01	1	05	-32.2	0.328	-9.000	-9.000	-999.	450.	118.0	0.02	4.18	1.00	5.51	275.	10.0	270.4	2.0
15	01	01	1	06	-34.9	0.355	-9.000	-9.000	-999.	507.	138.4	0.02	4.18	1.00	5.84	252.	10.0	270.4	2.0
15	01	01	1	07	-34.8	0.355	-9.000	-9.000	-999.	508.	138.9	0.02	4.18	1.00	5.85	251.	10.0	271.4	2.0
15	01	01	1	08	-19.3	0.250	-9.000	-9.000	-999.	306.	68.6	0.02	4.18	0.57	4.15	266.	10.0	270.9	2.0
15	01	01	1	09	31.4	0.236	0.499	0.005	134.	276.	-35.7	0.02	4.18	0.36	3.40	255.	10.0	273.1	2.0
15	01	01	1	10	103.0	0.183	1.101	0.005	441.	188.	-5.0	0.02	4.18	0.29	2.15	300.	10.0	277.0	2.0
15	01	01	1	11	152.0	0.131	1.445	0.005	675.	114.	-1.3	0.04	4.18	0.26	1.08	230.	10.0	278.8	2.0
15	01	01	1	12	175.1	0.131	2.058	0.006	1692.	114.	-1.1	0.02	4.18	0.25	1.31	109.	10.0	280.4	2.0
15	01	01	1	13	171.2	0.143	2.108	0.011	1860.	130.	-1.4	0.01	4.18	0.26	1.55	35.	10.0	281.4	2.0
15	01	01	1	14	140.5	0.177	1.982	0.011	1882.	179.	-3.4	0.01	4.18	0.27	2.16	55.	10.0	282.0	2.0
15	01	01	1	15	84.4	0.150	1.677	0.011	1895.	139.	-3.4	0.02	4.18	0.30	1.77	64.	10.0	282.5	2.0
15	01	01	1	16	8.8	0.148	0.789	0.010	1896.	136.	-31.1	0.02	4.18	0.40	2.15	70.	10.0	282.5	2.0
15	01	01	1	17	-7.9	0.117	-9.000	-9.000	-999.	96.	17.3	0.02	4.18	0.70	2.08	75.	10.0	279.9	2.0
15	01	01	1	18	-3.9	0.085	-9.000	-9.000	-999.	60.	13.5	0.05	4.18	1.00	1.24	196.	10.0	277.0	2.0
15	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.03	4.18	1.00	0.00	0.	10.0	274.9	2.0
15	01	01	1	20	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.03	4.18	1.00	0.00	0.	10.0	274.9	2.0
15	01	01	1	21	-10.8	0.137	-9.000	-9.000	-999.	121.	20.5	0.02	4.18	1.00	2.36	260.	10.0	274.2	2.0
15	01	01	1	22	-19.5	0.199	-9.000	-9.000	-999.	214.	43.7	0.02	4.18	1.00	3.36	262.	10.0	272.0	2.0
15	01	01	1	23	-18.8	0.192	-9.000	-9.000	-999.	202.	40.5	0.04	4.18	1.00	2.86	230.	10.0	272.0	2.0
15	01	01	1	24	-28.1	0.287	-9.000	-9.000	-999.	370.	90.9	0.02	4.18	1.00	4.86	270.	10.0	272.0	2.0

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0000521 , L0000522 , L0000523 , L0000524 , L0000525 ,
L0000526 , L0000527 , L0000528 , L0000529 , L0000530 ,
L0000531 , L0000532 , L0000533 ,
L0000534 , L0000535 , L0000536 , L0000537 , L0000538 ,
L0000539 , L0000540 , L0000541 ,
L0000542 , L0000543 , L0000544 , L0000545 , L0000546 ,
L0000547 , L0000548 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
464506.90	3810141.57	0.00004	465481.17	3810503.53	0.00066
465406.43	3810503.02	0.00061	465212.73	3810456.25	0.00023
464952.43	3810455.74	0.00012	465964.71	3810432.92	0.00029
465963.18	3810384.60	0.00023	465974.54	3810476.13	0.00033
466001.90	3810516.53	0.00035	466028.40	3810558.19	0.00034
466054.63	3810598.78	0.00031	466136.44	3810669.97	0.00022
466136.44	3810635.94	0.00024	466074.30	3810786.75	0.00016
465468.45	3810751.95	0.00031	465265.95	3810753.49	0.00027
465112.36	3810808.15	0.00014	465314.53	3810854.32	0.00014
465221.79	3810854.63	0.00013	463382.51	3811176.23	0.00001
463250.80	3811177.76	0.00001	463278.26	3810876.71	0.00001
465601.63	3810943.28	0.00009	464507.22	3809995.00	0.00004
464508.08	3809810.84	0.00005	464509.81	3809672.08	0.00005
464700.45	3809701.47	0.00018	464701.32	3809618.04	0.00018
464755.36	3809565.30	0.00042	465246.88	3809566.17	0.00028
464785.59	3809489.06	0.00013	464694.05	3809505.22	0.00011
464989.27	3810696.82	0.00016	467840.66		

3810027.92 0.00003
467774.00 3809972.05 0.00003 467765.08
3810268.74 0.00004
467360.52 3810321.90 0.00005 467361.23
3810282.35 0.00005
467962.68 3811258.22
0.00002

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF DPM IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.00066 AT (465481.17, 3810503.53, 1049.76, 1049.76, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.00061 AT (465406.43, 3810503.02, 1050.60, 1050.60, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.00042 AT (464755.36, 3809565.30, 1069.50, 1069.50, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.00035 AT (466001.90, 3810516.53, 1045.95, 1045.95, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.00034 AT (466028.40, 3810558.19, 1044.94, 1044.94, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.00033 AT (465974.54, 3810476.13, 1046.95, 1046.95, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.00031 AT (465468.45, 3810751.95, 1045.47, 1045.47, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.00031 AT (466054.63, 3810598.78, 1044.00, 1044.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.00029 AT (465964.71, 3810432.92, 1048.02, 1048.02, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.00028 AT (465246.88, 3809566.17, 1066.99, 1066.99, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 637 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 191 Calm Hours Identified

A Total of 446 Missing Hours Identified (1.02 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

ME W186	1122	MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used	0.50
ME W187	1122	MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET	
MX W450	17545	CHKDAT: Record Out of Sequence in Meteorological File at:	18010101
MX W450	17545	CHKDAT: Record Out of Sequence in Meteorological File at:	1 year gap

****
*** AERMOD Finishes Successfully ***
****

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APPENDIX 2.4:

RISK CALCULATIONS

Table 1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0-2 Age Bin Exposure Scenario - Construction Activity

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.02343	2.34E-05	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.7E-05	2.1E-06	5.0E+00	1.4E-03	4.7E-03							
TOTAL								2.1E-06			4.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

2.13

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	250
exposure duration (years)	0.96
inhalation rate (L/kg-day))	1090
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (0 to 2 years old)	10

Table 3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2-16 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00031	3.10E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.7E-07	7.3E-08	5.0E+00	1.4E-03	6.2E-05							
TOTAL								7.3E-08			6.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

0.07

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	13.23
inhalation rate (L/kg-day))	572
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.72
age sensitivity factor (ages 2 to 16 years	3

Table 4
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
16-30 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00031	3.10E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	7.8E-08	1.2E-08	5.0E+00	1.4E-03	6.2E-05							
TOTAL								1.2E-08			6.2E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

0.01

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	14
inhalation rate (L/kg-day))	261
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.73
age sensitivity factor (ages 16 to 30 years old)	1

Total Risk for All Age Bins (per million) **2.22**

Table 1
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
-0.25 to 0 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00035	3.50E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.2E-07	3.9E-09	5.0E+00	1.4E-03	7.0E-05							
TOTAL								3.9E-09			7.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	0.25
inhalation rate (L/kg-day))	361
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (age third trimester	10

Table 2
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
0-2 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00035	3.50E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	3.7E-07	9.3E-08	5.0E+00	1.4E-03	7.0E-05							
TOTAL								9.3E-08			7.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	2
inhalation rate (L/kg-day))	1090
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.85
age sensitivity factor (0 to 2 years old)	10

Table 3
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
2-16 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			$(ug/m^3)^{-1}$	$(mg/kg/day)^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00035	3.50E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.9E-07	8.7E-08	5.0E+00	1.4E-03	7.0E-05							
TOTAL								8.7E-08			7.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	14
inhalation rate (L/kg-day))	572
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.72
age sensitivity factor (ages 2 to 16 years	3

Table 4
Quantification of Carcinogenic Risks and Noncarcinogenic Hazards
16-30 Age Bin Exposure Scenario

Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**								
					URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
	(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	(mg/kg/day)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	0.00035	3.50E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	8.8E-08	1.3E-08	5.0E+00	1.4E-03	7.0E-05							
TOTAL								1.3E-08			7.0E-05	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

0.01

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	350
exposure duration (years)	14
inhalation rate (L/kg-day))	261
inhalation absorption factor	1
averaging time (years)	70
fraction of time at home	0.73
age sensitivity factor (ages 16 to 30 years old)	1

Total Risk for All Age Bins (per million) **0.20**

Table 5
Quantification of Carcinogenic Risks and Noncarcinogenic Risks
25-Year Worker Exposure Scenario

	Source	Mass GLC		Weight Fraction	Contaminant	Carcinogenic Risk				Noncarcinogenic Hazards/ Toxicological Endpoints**									
						URF	CPF	DOSE	RISK	REL	RfD	RESP	CNS/PNS	CV/BL	IMMUN	KIDN	GI/LV	REPRO	EYES
		(ug/m^3)	(mg/m^3)			(ug/m^3)$^{-1}$	($mg/kg/day$)$^{-1}$	(mg/kg-day)		(ug/m^3)	(mg/kg/day)								
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
1	Diesel Particulates	6.60E-04	6.60E-07	1.00E+00	Diesel Particulate	3.0E-04	1.1E+00	1.0E-07	3.9E-08	5.0E+00	1.4E-03	1.3E-04							
	TOTAL								3.9E-08 0.04			1.3E-04	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00

** Key to Toxicological Endpoints

RESP	Respiratory System
CNS/PNS	Central/Peripheral Nervous System
CV/BL	Cardiovascular/Blood System
IMMUN	Immune System
KIDN	Kidney
GI/LV	Gastrointestinal System/Liver
REPRO	Reproductive System (e.g. teratogenic and developmental effects)
EYES	Eye irritation and/or other effects

Note: Exposure factors used to calculate contaminant intake

exposure frequency (days/year)	250
exposure duration (years)	25
inhalation rate (L/kg-day))	230
inhalation absorption factor	1
averaging time (years)	70

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APPENDIX C
Amargosa Road & Palmetto Way Spec. Industrial Project Biological Resources Assessment Report

Amargosa Road & Palmetto Way Spec. Industrial Project
City of Hesperia, San Bernardino County, California

APN #: 0405-072-[52, 53, 55]

BIOLOGICAL RESOURCES ASSESSMENT REPORT

Prepared For:

Rachamim 5, LLC
Attention: Mr. Ramin Namvar
6001 E. Slauson Avenue
Commerce, CA 90040
Phone: 213.769.4222
ramin@titaniumfabrics.com

Prepared By:

CASC Engineering and Consulting, Inc.
27710 Jefferson Avenue, Suite 105
Temecula, California 92590
Contact: Kimberly Boydstun, Senior Biologist/Project Manager
Phone: 951.216.9933
Kboydstun@cascinc.com

October 2022

Amargosa Road & Palmetto Way Spec. Industrial Project
City of Hesperia, San Bernardino County, California

BIOLOGICAL RESOURCES ASSESSMENT REPORT

The undersigned certifies that this Report is a complete and accurate account of the findings and conclusions of a biological resources assessment for the above-referenced project.



Kimberly Boydstun
Senior Biologist/Project Manager

October 2022

Executive Summary

On behalf of Rachamim 5, LLC, CASC Engineering and Consulting (CASC) has prepared this Biological Resources Assessment Report for development of an industrial warehouse on vacant 30.52-acres in the City of Hesperia, San Bernardino County. California. The total Survey Area consisted of 45.61-acres in total [Project Site (30.52-acres) and a 500-foot buffer area]. The Project Site is undeveloped land. Project Impacts will occur on the entire 30.52-are Project Site. One (1) natural vegetation community, *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance, was observed and mapped within the boundaries of the Survey Area.

Based on the results of focused surveys and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that the Project Site has a low probability to support ayenia (*Ayenia compacta*) (CRPR 2B.3), Lincoln rockcress (*Boechera lincolnensis*) (CRPR 2B.3), Latimer's woodland-gilia (*Saltugilia latimeri*) (CRPR 1B.2), alkali mariposa-lily (*Calchortus striatus*) (CRPR 1B.2),pygmy poppy (*Canbya candida*) (CRPR 4.2), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) (CRPR 1B.2), Booth's evening primrose (*Eremothera boothii* ssp. *boothii*) (CRPR 2B.3), short-joint beavertail (*Opuntia basilaris* var. brachyclada) (CRPR 1B.2), and Parish's brittlescale (*Atriplex parishii*) (CRPR 1B.1). Focused surveys were conducted during the appropriate blooming season for each of these species (April – July). None of these special-status species were observed during the focused surveys. These species were absent during the spring/summer focused surveys and are therefore not expected to occur on the Project Site.

Western Joshua tree (State Listed-Candidate Species) was present on the Project Site. The location of fifty-two (52) live trees and seven (7) dead trees were recorded and are presented in this report. Relocation criteria (defined by CDFW) determined that thirty-one (31) of the Western Joshua trees meet the criteria for relocation. If Western Joshua tree can be incorporated into the Project Site landscape or avoided this would help to reduce the mitigation obligation. If avoidance of the Western Joshua Trees cannot be accompdated, then an Incidental Take Permit from CDFW must be acquired for Project development. CDFW will impose appropriate mitigation for "take" or disturbance of these trees.

Western burrowing owl (*Athene cunicularia*, SSC) is a locally significant species within San Bernardino County. Habitat conditions on the Project Site are suitable for burrowing owl. During the habitat assessment several burrows were noted of appropriate size to support this species at the Project Site. Focused surveys were conducted during the breeding season for this species (April, June, July and August 2022). Burrowing owl was absent from the Survey Area at the time of the surveys. No additional scat, pellets, or other sign was observed near the burrows or anywhere within the Survey Area to indicate occupation. As suitable habitat does exist at the Project Site a 14-30 day preconstruction survey for this species is recommended. This will ensure

that burrowing owl have not occupied the site since the focused surveys were conducted during the 2022 breeding season.

The Project Site is within the southern margin of the historical range of the Mohave ground squirrel (*Xerospermophilus mohavensis,* ST). Habitat conditions on the Project Site are suitable for Mohave ground squirrel and it was determined that this species has moderate potential of occurrence. Focused surveys were conducted for this species with a total of three trapping sessions which occurred during April, May, and June 2022. Mohave ground squirrel was not captured during the protocol level sessions and is not expected to occur at the Project Site. Implementation of the Project will not result in the loss of individual Mohave ground squirrel, nor will Project development adversely affect local or regional populations of these species.

The Survey Area has a low potential to support desert tortoise (*Gopherus agassizii*, FE/SE). While suitable habitat is present in the Survey Area, it is outside of the current known range for this species. Further, desert tortoise has not been recorded near the Project Site for many years. The local desert tortoise population has undergone severe declines over time. Focused surveys for desert tortoise were performed during April 2022. During the focused surveys no sign (scat, burrows, etc.) of this species was noted and this species is not expected to occur at the Project Site. Implementation of the Project will not result in the loss of individual desert tortoise, nor will Project development adversely affect local or regional populations of these species.

Finally, there is no U.S. Fish and Wildlife Service-designated critical habitat within the Survey Area, and there are no wetland or non-wetland jurisdictional features on the Project Site.

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LIST OF ACRONYMS AND ABBREVIATIONS

amsl	Above Mean Sea Level
CASC	CASC Engineering and Consulting, Inc.
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
°F	Fahrenheit
FESA	Federal Endangered Species Act
ft	Feet
IPaC	Information for Planning and Consultation online system
MCV	Manual of California Vegetation
MBTA	Migratory Bird Treaty Act
NWI	National Wetlands Inventory
Project	Amargosa Road and Palmetto Way Spec. Industrial Project
SSC	Species of Special Concern
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	California Department of Fish and Wildlife Watch List Species

Section 1 Introduction

On behalf of Rachamim 5, LLC, CASC Engineering and Consulting (CASC) has prepared this Biological Resources Assessment Report for development of an industrial warehouse on vacant parcels in Hesperia, California. This Report describes the biological resources, record searches and literature review, survey methodology, and results of the biological resources survey and review conducted for the Project.

1.1 PROJECT LOCATION

The Project is located on Palmetto Way, in Hesperia, San Bernardino County, California (Figure 1, Regional Vicinity). The property consists of three parcels, Accessor's Parcel Number: 0405-075-[52, 53,55] US Geological Society (USGS) 7.5-minute *Baldy Mesa SE* Quadrangle (Figure 2, USGS Quadrangle Map), Township 4 north, range 5 west, (latitude *117.3777327°W, longitude 34.4366696°N).*

1.2 PROJECT BACKGROUND AND DESCRIPTION

Rachamim 5, LLC proposes to construction of a 498,500 square foot Industrial Warehouse Building (Project) with up to 25,000 square feet of office space. The proposed Project will include 76 loading dock doors, 182 truck/trailer parking spaces and 281 auto parking spaces on three (3) parcels consisting of approximately 30.52 undeveloped acres within the City of Hesperia in the Regional Commercial Zone. The parcels are bounded on the north by Avenal Street, south by Palmetto Way, Amargosa Road and Interstate-15 to the east, and open space to the west. Three (3) entrances to the site are provided, one (1) on the east side from Palmetto Way, one (1) from Palmetto Way on the south side of the site, and a proposed third entrance/exit onto Palmetto Way from the truck/trailer parking area at the southwest corner of the site. The facility will be built on spec and will be designed to accommodate 500 to 600 employees; there is no tenant currently attached to the project. Project Site plans are provided in Appendix A, Conceptual Plans.

1.3 PURPOSE OF DOCUMENT

This Report documents all biological resources identified within the Survey Area during general biological resource survey conducted by CASC Biologists. The Survey Area included the Project Site plus a 500-foot buffer. The Survey Area was surveyed to determine the likelihood of State-listed and/or federally-listed rare, threatened, or endangered species, and other special-status[1] plants, animals, and natural communities (Figure 3, Photo Point Location Map). This Report includes an analysis of the potential for the Survey Area to support special-status plant and wildlife

[1] As used in this Report, "special-status" refers to plant and wildlife species that are federally-/State-listed, proposed, or candidates; plant species that have been designated a California Rare Plant Rank species by the California Native Plant Society; wildlife species that are designated by the California Department of Fish and Wildlife as Fully Protected, Species of Special Concern, or Watch List species; and State/locally rare vegetation communities.

species and special-status vegetation communities that have been previously recorded, or are known to occur within the vicinity, and that are subject to provisions of the Federal Endangered Species Act (FESA) of 1973, Migratory Bird Treaty Act (MBTA), California Endangered Species Act (CESA), California Environmental Quality Act (CEQA), California Fish and Game Code (CFGC), California Native Plant Protection Act, California Desert Native Plants Act (CDNPA), Bald and Golden Eagle Protection Act, and other local policies and ordinances protecting biological resources.

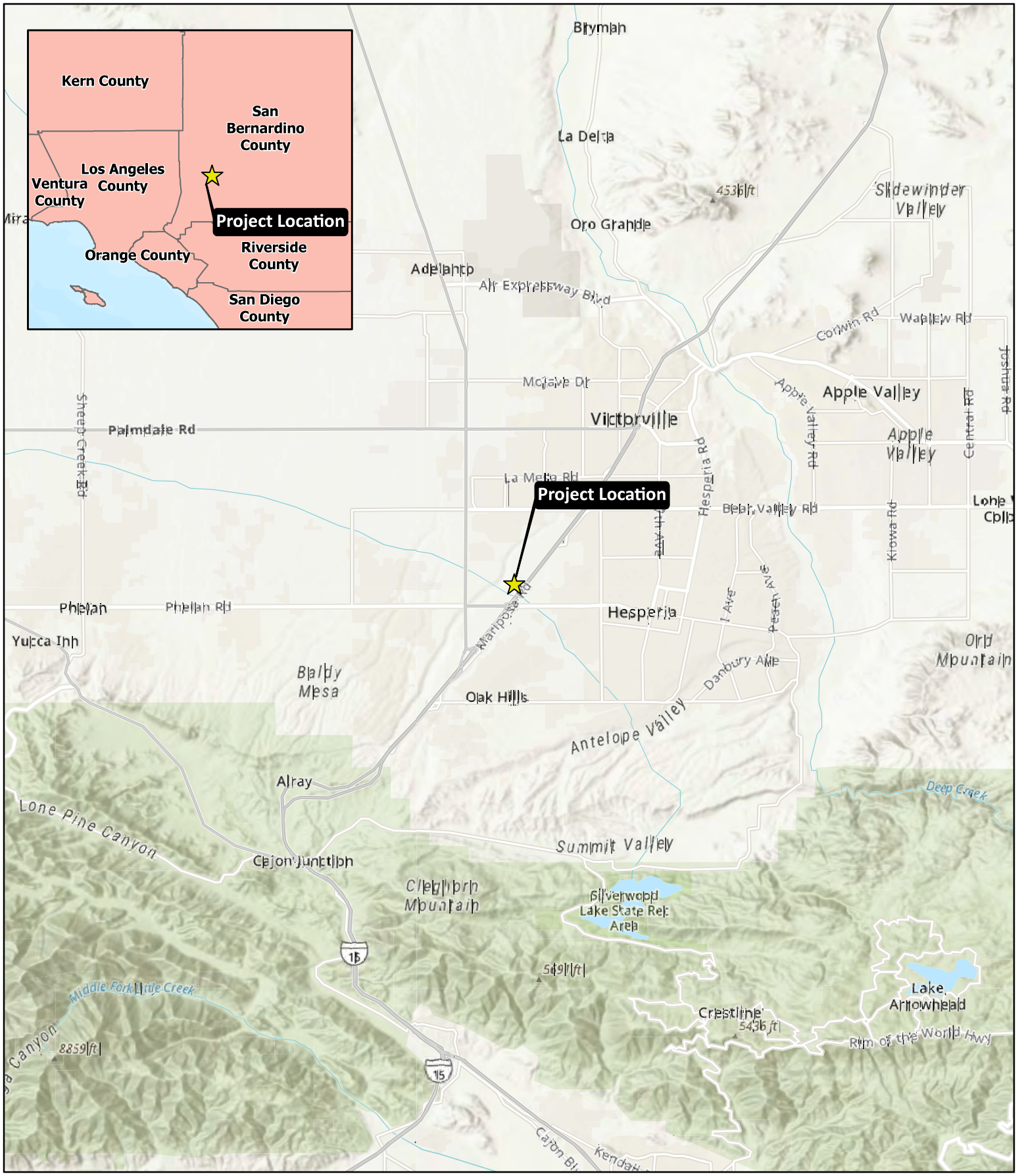


Figure 1
Regional Vicinity

CASC Engineering and Consulting
www.cascinc.com

N

0 2 4 8
1" = 3.95 miles

APN: 0405-072-[52,53,55]

City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, NASA, NGA, USGS, Esri, USGS

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.

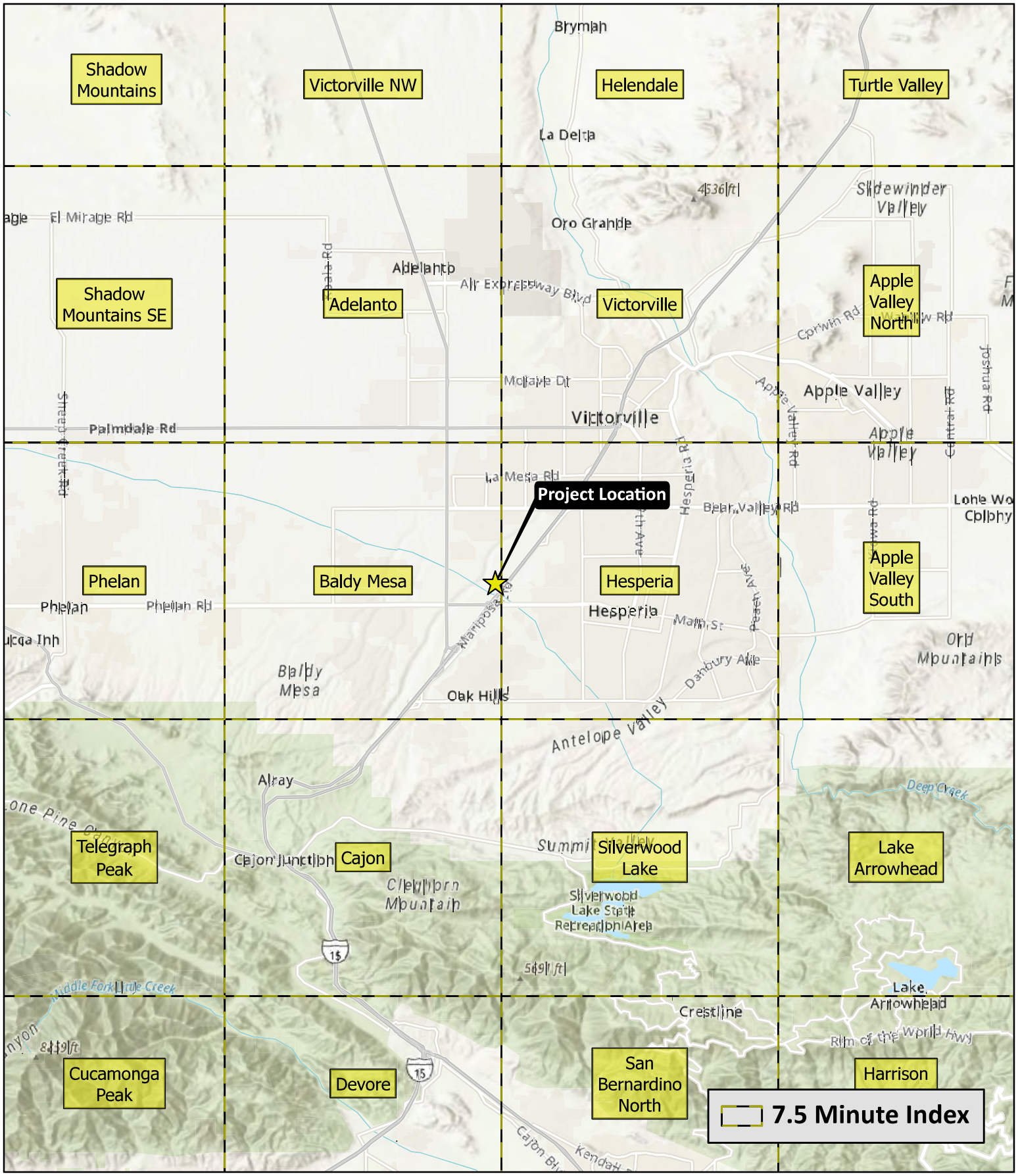


Figure 2

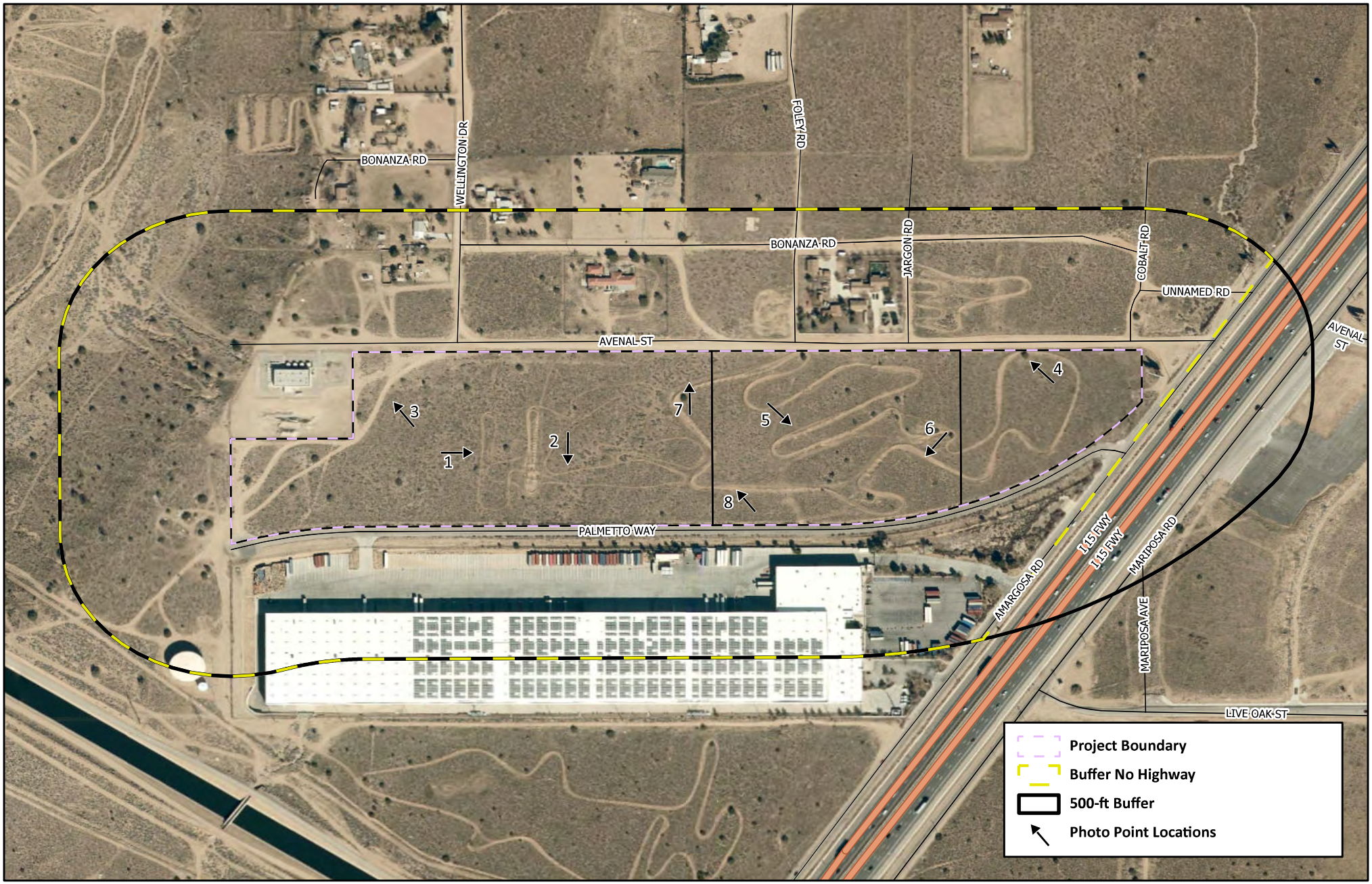
USGS

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.

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City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, NASA, NGA, USGS



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N

0 250 500 1,000

1" = 460 Feet

San Bernardino County, Maxar

Figure 3
Photo Point Location Map

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way
Spec. Industrial Project

Section 2 Methodology

2.1 LITERATURE REVIEW AND DATABASE SEARCHES

Prior to conducting the field surveys, CASC conducted a thorough literature review and records search of the Survey Area encompassing a nine (9) quad search of the U.S. Geological Survey (USGS). The Survey Area is located between *Baldy Mesa* quadrangle and *Hesperia* quadrangle (north of the California Aqueduct*).* A search of the adjacent quadrangles was conducted: *Shadow Mountain SE, Adelanto, Victorville, Phelan, Telegraph Peak, Cajon, and Silverlake Lake,* California. The nine (9) quad search was used for the CDFW Biogeographic Information and Observation System (CDFW 2022a), CDFW California Natural Diversity Database (CNDDB) RareFind 5 (CDFW 2022b), and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS 2022). In addition, the Survey Area was used to generate a Species and Resources List from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online system (IPaC; USFWS 2022a). This helped to identify special-status plant and wildlife species, vegetation communities, and other biological resources that have been previously documented within, near, and/or that have the potential to occur within the Survey Area. The *Special Animals List* (CDFW 2022c, *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2022d), and CNPS California Rare Plant Ranking System (CRPR) were reviewed for the current status of rare and endangered plant and wildlife species. Other resources reviewed include the USFWS Critical Habitat for Threatened & Endangered Species Mapper (USFWS [ArcGIS Online] 2022); recent and historical aerial photography (Google Earth Pro 2022); the U.S. Department of Agriculture, Natural Resources Conservation Service (USDA) Web Soil Survey (USDA 2022a); and USFWS National Wetland Inventory (NWI) Mapper (USFWS 2022b).

2.2 GENERAL BIOLOGICAL RESOURCES SURVEY

Following the literature review, CASC's Biologists Kimberly Boydstun and Cory Peterson, conducted a general biological resources assessment of the entire Survey Area. The Survey Area is defined as the Project Site plus a 500-foot buffer where accessible and shown on Figure 3. Undeveloped property to the west of the Project Site was also inventoried. Properties to the east is Amargosa Road and Interstate 15, to the south is a Palmetto Way and an existing warehouse, to the north is private residences which were fenced. These areas to the north, south, and east were not inventoried. The first site assessment was performed on April 27, 2022, between the hours of 0815 and 1500, with weather conditions consisting of temperatures ranging from 47 to 75 degrees Fahrenheit (°F), winds approximately 2 to 3 miles per hour, and clear skies. The second site assessment was performed on May 2, 2022, between the hours of 1000 to 1330, with weather conditions consisting of temperatures ranging from 68 to 76°F, winds approximately 2-3 miles per hour, and clear skies. The surveys were conducted to document existing site conditions, obtain an inventory of plant and wildlife species, map vegetation communities/land uses, determine the potential for special-status plant and wildlife resources to occur within the

Survey Area, perform a Joshua tree (*Yucca brevifolia*) inventory, and to identify any jurisdictional aquatic features. Representative photographs of the Project Site are provided at the end of this Report in Appendix B, Project Site Photographs. Figure 3, Photo Point Location Map, shows the location and direction each photo was taken.

2.2.1 Vegetation/Land Use Mapping and Plant Species Inventory

Classification of the vegetation communities and other land uses within the Survey Area is based on the descriptions of terrestrial vegetation classification systems described in *A Manual of California Vegetation* (MCV Sawyer et al. 2009) and cross referenced with the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986). The vegetation on site was classified as *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance. Plant species nomenclature and taxonomy follow *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al. 2012). Refer to Appendix C, Plant Compendia for a complete list of plant species observed within the Survey Area.

2.2.2 General Wildlife Observations

Field guides used to assist with identification of species during the habitat assessment included *The Sibley Guide to Birds* (Sibley 2014) for birds, *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003) for herpetofauna and *A Field Guide to Mammals of North America* (Reid 2006). Although common names of wildlife species are well standardized, scientific names are provided immediately following common names of wildlife species in this Report (first reference only). To the extent possible, nomenclature of birds follows the most recent annual supplement of the American Ornithological Union's *Checklist of North American Birds* (Chesser et al. 2020), nomenclature of amphibians and reptiles follows *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding* (Crother 2012), and nomenclature for mammals follows the *Revised Checklist of North American Mammals North of Mexico* (Bradley et al. 2014). All wildlife species observed and/or otherwise detected through sign (e.g., tracks, scat) were recorded. Other wildlife species may occupy the Survey Area but, in some cases, may be nocturnal and not easily detectable during the day without extensive survey efforts during the appropriate season. Some species are transients or migrants and may occupy the Survey Area other times of the year outside of the time that the field survey was conducted. Refer to Appendix D, Wildlife Compendia for a complete list of wildlife species observed or otherwise detected within the Survey Area.

2.3 OTHER FIELD STUDIES

A database search of the CDFW's CNDDB was used to identify and map all known ~~(~~federally and State Threatened species) locations within one (1) to five (5) miles of the Project Site as well as a comprehensive literature review of available previous biological studies and environmental documents completed for the Project and its vicinity. CASC's Biologists also reviewed USFWS

Critical Habitat documentation to determine the Project's location in relation to Critical Habitat (Figure 4, Critical Habitat) (USFWS [ArcGIS Online] 2022). There is no critical habitat on or within close proximity to the Project Site. CASC's Biologists conducted 100-percent visual coverage of the Survey Area and performed a habitat assessment and burrow search of the Project Site specifically for Western burrowing owl and desert tortoise.

2.3.1 Special-Status Plants

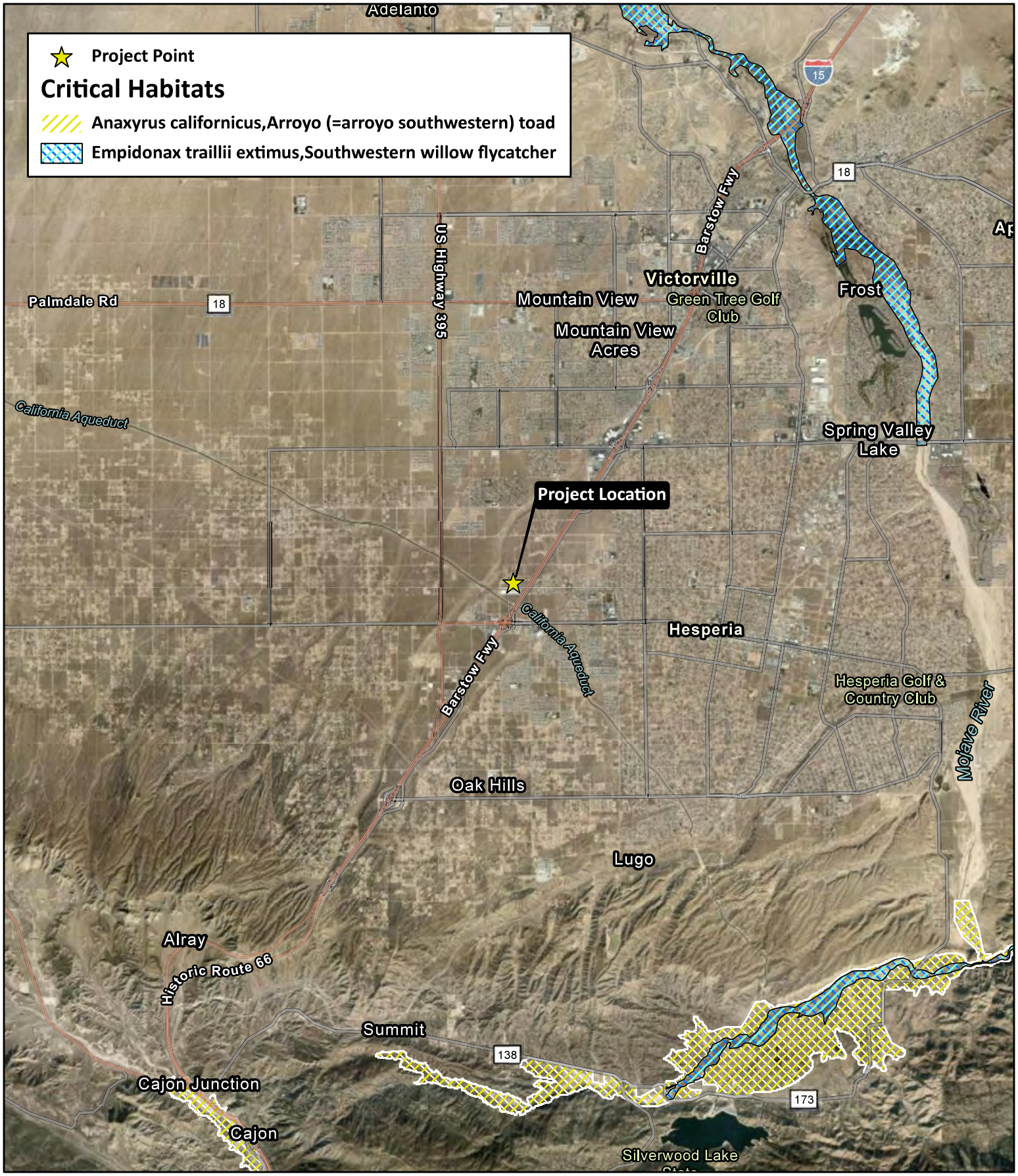
A database search of the CDFW's CNDDB and the CNPS Online Inventory of Rare and Endangered Plants was used to identify and map rare plant records from a 9-quad search within a five (5) mile radius of the Project Site. Based on the database search and literature review, it was determined that a total of nine (9) special-status plant species have the probability of occurrence in the general range of the Survey Area. Appendix E, CNDDB Summary Table from California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDB) search conducted for the Project.

2.3.2 Special-Status Wildlife

A database search of the CDFW's CNDDB and RareFind/Bios Online Inventory was used to identify and map wildlife records from a 9-quad search within a five (5) mile radius of the Project Site. Based on the database search and literature review, it was determined that a total of forty-six (46) special-status wildlife species have the probability of occurrence within the general range of the Survey Area. Specific habitat requirements and a records search for each species were considered and it was determined that three (3) species had a high probability of occurrence within the local vicinity of the Project Site. Appendix E, CNDDB Summary Table search conducted for the Project.

2.3.3 Jurisdictional Features Analysis

CASC conducted a thorough literature review of relevant resources to obtain an initial understanding of the environmental setting and to preliminarily identify features that could be regulated by the jurisdictional agencies. CASC reviewed the USFWS NWI Mapper (USFWS 2022b). Appendix F shows the results of the NWI Mapper search. There are no jurisdictional features on the Project Site.



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0 1 2 4
1" = 2.17 miles

Figure 4
Critical Habitat

APN: 0405-072-[52,53,55]

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.

San Bernardino County, Earthstar Geographics, City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

Section 3 Existing Conditions

The following is a summarization of the results of the database review and general biological resources survey performed by CASC. Discussions regarding the general environmental setting, vegetation communities and other land uses present, and plant and wildlife species observed are presented below. Representative photographs of the Project Site are provided in Appendix B, and a complete list of all the plant and wildlife species observed within the Survey Area during the field survey is provided in Appendix C and D, respectively.

3.1 ENVIRONMENTAL SETTING

The Project Site consists of 30.52-undeveloped acres and is located north of Palmetto Way, south of unimproved Avenal Street, and east of Amargosa Road in Hesperia, California. Access to the entire site was unobstructed and the biologists were able to perform a one hundred percent visualization of the Project Site. A large industrial building resides south of the Project Site, to the north along Avenal Street are homes with fenced yards, to the east is Amargosa Road and I-15, and to the west is a fenced utilities yard and open space.

3.1.1 Climate

The Survey Area, located in the high desert, has an arid climate characterized by cool winters and hot summers. With an average annual high temperature typically of approximately 79°F, highs in the summer average approximately 100°F and lows in the winter averaging approximately 4 °F, and low humidity throughout the year. Average annual precipitation for the Hesperia, California, area is approximately 5.06 inches (U.S. Climate Data 2021).

3.2 TOPOGRAPHY AND SOILS

The Survey Area is in a region of San Bernardino County known as the “High Desert” due to its approximate elevation of 3,600 feet above mean sea level (amsl). Much of the Survey Area is relatively flat, with surface elevations varying between approximately 3,468 feet amsl in the southwestern corner to approximately 3,443 feet amsl in the northeastern corner.

Soils within the Survey Area and in adjoining areas were reviewed prior to the field survey using the Web Soil Survey (USDA 2021a) (Figure 5, USDA Soils Map). Mapped soils within the Survey Area include the following:

- Cajon Sand, 0 to 2 Percent Slopes
- Cajon Sand, 2 to 9 Percent Slopes
- Cajon Sand, 9 to 15 Percent Slopes
- Hesperia Loamy Fine Sand, 2 to 5 Percent Slopes

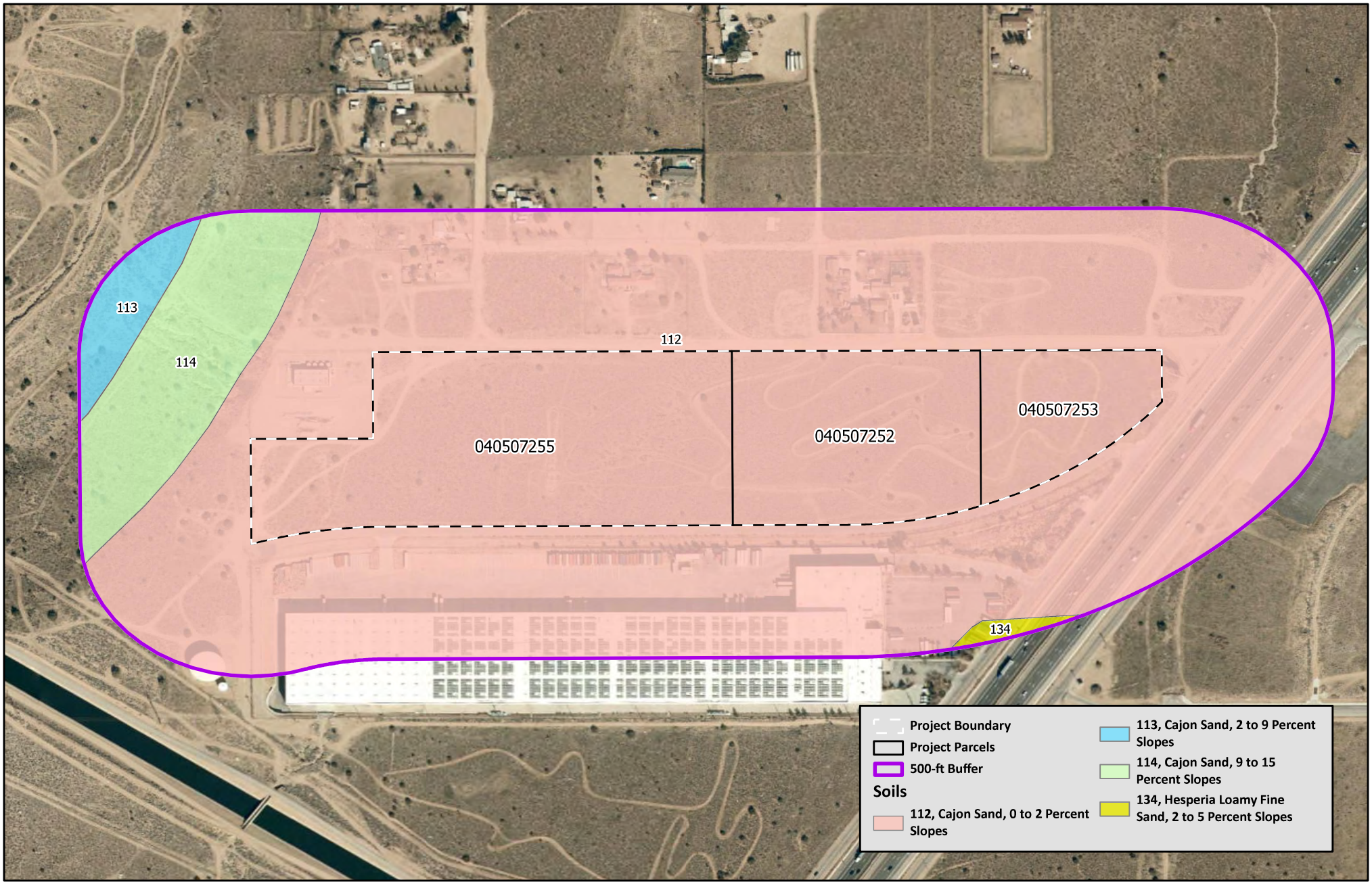
3.3 VEGETATION COMMUNITIES AND OTHER LAND USES

The Project Site is undeveloped and has been disturbed by grading which appears to have been from some time ago as the vegetation is growing back but is of small stature. Impacts will encompass the entire 30.52-acres of the Project Site. The vegetation community within the Survey Area was identified as *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance with dominant species being white bursage (*Ambrosia dumosa*), creosote bush (*Larrea tridentata*) and Mexican tea *(Ephedra trifurca).* Joshua tree (*Yucca brevifolia*) (CDFW Candidate Listed species) is present on the Project Site. A complete list of all species recorded within the Survey Area can be found in Appendices C and D.

CASC's biologists recorded a total of fifty-two (52) live Western Joshua tree within the Project boundary. Seven (7) dead Joshua trees were recorded as it is required by CDFW to record the location of dead trees. Western Joshua tree were also recorded within the Project buffer. GPS was used to record the location of all dead and viable Western Joshua trees on the Project Site (Figure 6, Joshua Tree and Potential Burrow Locations). The Project Site was visited multiple times to perform focused plant and wildlife surveys. During each visit the biologists completed a compendia of plants and wildlife observed. Appendix C and D lists all species observed during the field surveys. Field surveys occurred from April through July of 2022.

3.4 GENERAL WILDLIFE OBSERVATIONS

The Survey Area is dominated by disturbed native vegetation, ruderal species, and friable soils. Wildlife diversity during the field survey was generally low, likely due to the low diversity of the plant assemblage. The commonly observed species within the Survey Area was mourning dove (*Zenaida macroura*) and common raven (*Corvus corax*). Refer to Appendix C for a complete list of wildlife species observed during the field surveys.



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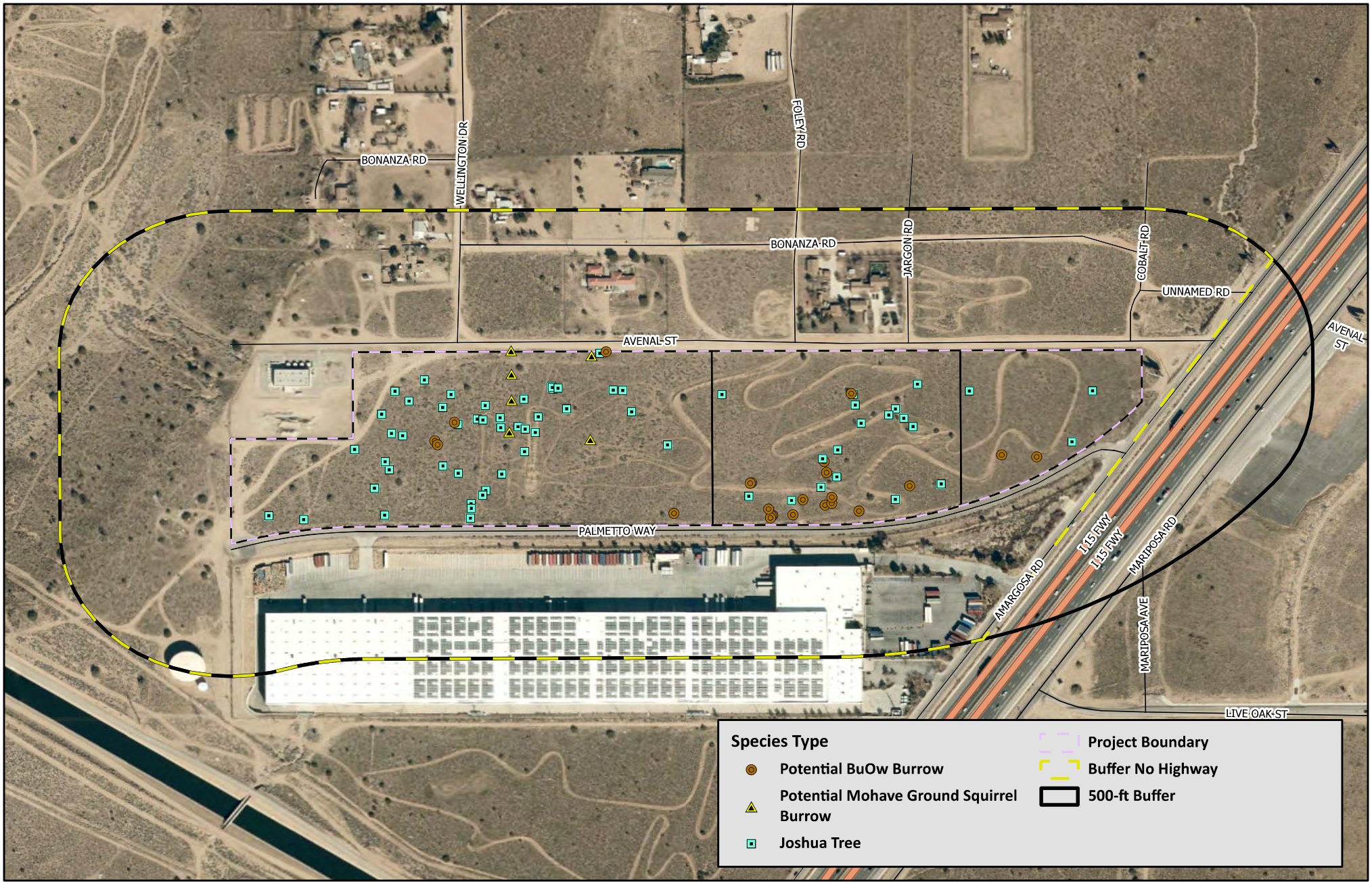
1" = 460 Feet

San Bernardino County, Maxar

Figure 5
Soils

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.



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0 200 400 800

1" = 460 Feet

Figure 6

Joshua Tree and Potential Burrow Locations

APN: 0405-072-[52,53,55]

San Bernardino County, Maxar

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.

3.5 REGULATORY SETTING

3.5.1 Federal Regulations

Federal Endangered Species Act (FESA) of 1973

As defined within the FESA of 1973, an endangered species is any animal or plant listed by regulation as being in danger of extinction throughout all, or a significant portion, of its geographical range. A threatened species is any animal or plant that is likely to become endangered within the foreseeable future throughout all or a significant portion of its geographical range. Without a special permit, federal law prohibits the "take" of any individuals or habitat of federally-listed species. Under Section 9 of the FESA, "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" has been clarified to include "any act which actually kills or injures fish or wildlife and emphasizes that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife." Enforcement of FESA is administered by the USFWS.

Under the definition used by the FESA, "Critical Habitat" refers to specific areas within the geographical range of a species that were occupied at the time it was listed that contain the physical or biological features that are essential to the survival and eventual recovery of that species and that may require special management considerations or protection, regardless of whether the species is still extant in the area.

Migratory Bird Treaty Act (MBTA)

Pursuant to the MBTA (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The statute states:

"Unless and except as permitted by regulations made as hereinafter provided in this subchapter, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill...any migratory bird, any part, nest, or egg of any such bird...included in the terms of the [Migratory Bird] conventions…"

The Act covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered a "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six (6) families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons

and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

Executive Order 13112 – Invasive Species

On February 3, 1999, President William J. Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm, or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the State's invasive species list, maintained by the California Invasive Species Council to define the invasive plants that must be considered as part of the NEPA analysis for a proposed project. Under the Executive Order, federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered.

3.5.2 State Regulations

California Environmental Quality Act (CEQA)

CEQA provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" species as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the State of California has its own CESA, enforced by the CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

California Fish and Game Code (CFGC)

Sections 3503, 3503.5, 3511, and 3513

The CDFW administers the CFGC. There are particular sections of the CFGC that are applicable to natural resource management. For example, Section 3503 makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey), such as hawks, eagles, and owls, are protected under Section 3503.5 which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). In addition, Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Section 4150

Section 4150 of the CFGC protects nongame mammals, defined as any naturally-occurring mammal in California that is not a game mammal, fully protected mammal, or fur-bearing mammal. Nongame mammals, which includes bats and bat roosts, may not be taken or possessed except as provided by the CFGC or in accordance with applicable regulations.

Section 749.11, Title 14, California Code of Regulations

The proposed addition of Section 749.11, Title 14, California Code of Regulations creates a special order allowing incidental take of western Joshua tree during CESA candidacy necessary to address this emergency.

On September 22, 2020, the Commission determined that listing may be warranted pursuant to FGC Section 2074.2. Western Joshua tree became a candidate species under CESA, effective upon publication of the notice of findings on October 9, 2020 (Office of Administrative Law notice number Z2020- 0924-01). Pursuant to FGC Section 2074.6, the Department will undertake a one-year status review. After the Commission receives the Department's status review, the

Commission will make a final decision on listing. As of October 12, 2022, the final decision by the Commission has been postponed until February 2023.

Statutory Authority

Candidate species are protected from take under CESA pursuant to FGC Section 2085 during the remainder of the CESA listing. Under FGC Section 2084, CESA provides that the Commission may adopt regulations to authorize take of candidate species, based on the best available scientific information, when the take is otherwise consistent with CESA. As with all regulations, the Commission may adopt a regulation under Section 2084 on an emergency basis when it determines that a situation exists which threatens public health and safety or general welfare.

Another means to allow take of CESA candidate species is by Incidental Take Permit (ITP) pursuant to FGC Section 2081, subdivision (b), from the Department. An ITP allows a permittee to take CESA listed or candidate species if such taking is incidental to, and for the purpose of, carrying out an otherwise lawful activity, including for research or monitoring activities of such activity.

Native Plant Protection Act

Sections 1900–1913 of the CFGC were developed to preserve, protect, and enhance Rare and Endangered plants in the State of California. The act requires all State agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Desert Native Plants Act (CDNPA)

Division 23 of the California Food and Agriculture Code consists of the CDNPA. The CDNPA was developed to protect certain species of California desert native plants from unlawful harvesting on both public and privately-owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee.

3.5.3 Local Policies and Ordinances

San Bernardino County Countywide Plan

The Conservation Element of the County of San Bernardino General Plan identifies measures to preserve the unique environmental features and natural resources of the desert region, including native wildlife and vegetation. One role of the Conservation Element involves the identification of a community's natural resources and the adoption of policies for their preservation, development, and wise use.

Section 4 Results

The following discusses the potential for special-status plant and wildlife species and special-status vegetation communities to occur within the Survey Area. The CNDDB and CNPS Online Inventory were queried for reported locations of special-status plant and wildlife species as well as special-status natural vegetation communities within the 9-quad search radius. All CNDDB occurrences, documentation of special-status species and vegetation communities, and USFWS-designated Critical Habitat within a five (5) mile radius of the Project Site are shown in Figure 4. An evaluation of the potential for each species identified in the database records search to occur within the Survey Area is presented in the following section.

4.1 SPECIAL-STATUS SPECIES

The field survey was conducted to assess the conditions of the habitat(s) within the boundaries of the Survey Area to determine if the existing vegetation communities, at the time of the field survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species. Additionally, the potential for special-status species to occur within the Survey Area was determined based on the reported locations in the CNDDB and CNPS Online Inventory and the following:

- **Present**: the species was observed or detected within the Survey Area during the field survey.
- **High**: Recent occurrence records indicate that the species has been known to occur on or within one (1) mile of the Survey Area and the Survey Area is within the normal or expected range of this species. Intact, suitable habitat preferred by this species occurs within the Survey Area and/or there is viable landscape connectivity to a local known extant population(s) or sighting(s).
- **Moderate**: Recent occurrence records indicate that the species has been known to occur within one (1) mile of the Survey Area and the Survey Area is within the normal expected range of this species. There is suitable habitat within the Survey Area but the site is ecologically isolated from any local known extant populations or sightings.
- **Low**: Recent occurrence records indicate that the species has been known to occur within 5 miles of the Survey Area, but the Survey Area is outside of the normal expected range of the species and/or there is poor quality or marginal habitat within the Survey Area.
- **Not Expected**: There are no occurrence records of the species occurring within 5 miles of the Survey Area, there is no suitable habitat within the Survey Area, and/or the Survey Area is outside of the normal expected range for the species.
- **Absent**: The species has been determined to conclusively be absent from the Survey Area.

The literature search identified many species having the probability of occurrence on the Project Site. Special-status plant and wildlife species were evaluated for their potential to occur within the Survey Area based on habitat requirements, availability and quality of suitable habitat, and known distributions. After these considerations, the biologists identified nine (9) special-status plant species and three (3) special-status wildlife species as having the highest probability of occurrence. A complete table of special-status species queried for this report can be found in Appendix E, as well as definitions for ranking of each category (Appendix E, page 10).

4.1.1 Special-Status Plant Species

Nine (9) special-status plant species were identified from literature search and local knowledge and familiarity as having potential to occur within the region of the Survey Area. Focused surveys were conducted on April 6, May 26, and July 7, 2022 by senior biologist Philippe Vergne of Envira. Based on the results of focused surveys and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that the Project Site has a **low** probability to support these species. Additionally, these species were **absent** during the focused surveys**.** Focused surveys for the following species were performed: ayenia (*Ayenia compacta*) (CRPR 2B.3), Lincoln rockcress (*Boechera lincolnensis*) (CRPR 2B.3), Latimer's woodland-gilia (*Saltugilia latimeri*) (CRPR 1B.2), alkali mariposa-lily (*Calchortus striatus*) (CRPR 1B.2),pygmy poppy (*Canbya candida*) (CRPR 4.2), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) (CRPR 1B.2), Booth's evening primrose (*Eremothera boothii* ssp. *boothii*) (CRPR 2B.3), short-joint beavertail (*Opuntia basilaris* var. brachyclada) (CRPR 1B.2), and Parish's brittlescale (*Atriplex parishii*) (CRPR 1B.1). None of these special-status species were observed during the field surveys performed nor are they expected to occur at the Project Site. The focused plant survey report completed by Envira can be reviewed in Appendix G. It details the dates, weather conditions and habitat associations considered for each plant species.

CRPR: California Rare Plant Rank

1B.1	Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2	Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California
2B.3	Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
4.2	Plants of limited distribution; fairly threatened in California

Western Joshua Tree Inventory

CASC's biologist performed an inventory of Western Joshua trees (*Yucca brevifolia*, State Listed as Candidate Threatened) and locally sensitive cactus within the Survey Area (Project Site and the 500-foot buffer). Fifty-two (52) live Joshua trees were recorded during the April 27, 2022 site visit. Additionally, seven (7) dead Joshua trees were recorded on the Project Site. Data on Western Joshua tree within the buffer was recorded as required by CDFW but are not presented in Table 1 Western Joshua Tree Inventory. Per CDFW reporting requirements, the Western Joshua trees in Table 1 was photographed, a general health assessment performed (height, branching, clonal, etc.), and GPS location of each tree was noted (Table 1, Western Joshua Tree Inventory). *Sololocator* was used to correspond the photographs and GPS locations of the Joshua trees on the Project Site and within the buffer.

Highlighted in blue in Table 1 are those Western Joshua trees deemed appropriate for relocation according to the CDFW criteria (see below, Section 4.1.2 Criteria for Relocation). Highlighted in yellow are the largest and healthiest trees on site. Avoidance or relocation of Western Joshua trees will reduce the mitigation obligation with avoidance being the preferred strategy followed by on-site relocation of Western Joshua trees. Thirty-one (31) of the Western Joshua trees meet the criteria for relocation, the very best specimens can be selected to improve the chances of survival and overall success. If Western Joshua tree can be incorporated into the Project Site landscape or avoided this would help to reduce the mitigation obligation. Avoidance and relocation are highly valued by the California Department of Fish and Wildlife. Table 1 shows the GPS location of all Western Joshua tree on-site, their approximate height and a general health assessment.

Table 1. Western Joshua Tree Inventory

Tree Number	Approx Height inches/foot	Health/Notes	Location/GPS Coordinate	Panicle* (Bloom)
1	4-foot	Good, 2-trunks, clonal	117°38'15"W 34°43'60"N	No
2	4-foot	Good, 1-trunk	117°38'14"W 34°43'59"N	No
3	5-foot	Good; 1-trunk	117°38'11"W 34°43'58"N	No
4	5½-foot	Good; 1-trunk	117°38'03"W 34°43'59"N	No
5	1-foot	Poor, 1-trunk, laying over, yellow	117°38'03"W 34°43'63"N	No
6	3½ -foot	Good; 1-trunk	117°38'03"W 34°43'64"N	No
7	1-foot	Good; 1-trunk	117°38'06"W 34°43'65"N	No
8	Flat on ground	Poor, 1-trunk, yellow	117°38'04"W 34°43'61"N	No
9	2-foot	Poor, 1-trunk, on ground, yellow	117°38'02"W 34°43'67"N	No
10	3½ -foot	Good; 1-trunk	117°38'01"W 34°43'67"N	No
11	5-foot	Good, 1-trunk	117°38'03"W 34°43'69"N	No

12	5-foot and 4½ foot	Good, 2-trunks, clonal	117°38'02"W 34°43'71"N	No
13	4-foot	Good, 1-trunk	117°38'01"W 34°43'70"N	No
14	20-foot	Good, single trunk	117°37'99"W 34°43'72"N	Yes
15	3½-foot 1-foot	Good, 2-trunks; clonal	117°37'97"W 34°43'71"N	No
16	3½-foot 1-foot	Good, 2-trunks, clonal	117°37'98"W 34°43'69"N	No
17	4-foot	Good, 1-trunk	117°37'96"W 34°43'68"N	No
18	3½-foot	Good; 1-trunk	117°37'98"W 34°43'64"N	No
19	5-foot	Good, 1-trunk	117°37'98"W 34°43'63"N	No
20	2-foot 4½-foot	Good, 2-trunks, clonal	117°37'95"W 34°43'60"N	No
21	4½-foot	Good, 1-trunk	117°37'95"W 34°43'59"N	No
22	3-foot	Good, 1-trunk	117°37'95"W 34°43'59"N	No
23	3-foot	Good, 1-trunk	117°37'93"W 34°43'61"N	No
24	6-foot	Good, 1-trunk	117°37'94"W 34°43'61"N	No
25	4-foot	Good, 1-trunk	117°37'92"W 34°43'63"N	No
26	6½-foot	Good, 1-trunk	117°37'94"W 34°43'68"N	No
27	4-foot	Good, 1-trunk	117°37'94"W 34°43'68"N	No
28	3½-foot	Good, 1-trunk	117°37'93"W 34°43'69"N	No
29	2-foot	Good, 1-trunk	117°24'8"W 34°24'48"N	No
30	2-foot	Good, 1-trunk	117°37'92"W 34°43'67"N	No
31	2-foot	Good, 1-trunk	117°37'90"W 34°43'67"N	No
32	3-foot	Good; 1-trunk	117°37'90"W 34°43'65"N	No
33	3½-foot	Good, 1-trunk	117°37'87"W 34°43'71"N	No
34	3½-foot	Good, 1-trunk	117°37'87"W 34°43'71"N	No
35	25-foot	Good, 1-trunk	117°37'82"W 34°43'74"N	Yes
36	2-foot	Good, 1-trunk	117°37'81"W 34°43'71"N	No
37	3-foot	Good, 1-trunk	117°37'80"W 34°43'71"N	No
38	Dead, 15-foot	Dead, laying on ground	117°24'6"W 34°24'49"N	No
39	Dead, 8-foot	Dead, laying on ground	117°37'76"W 34°43'66"N	No
40	Dead, 6-foot	Dead, laying on ground	117°37'70"W 34°43'71"N	No
41	Dead, 10-foot	Dead, laying on ground	117°37'68"W 34°43'61"N	No
42	Dead	Dead	117°37'64"W 34°43'60"N	No
43	15-foot	Good, 1-trunk	117°37'61"W 34°43'62"N	Yes
44	18-foot	Good, 1-trunk	117°37'59"W 34°43'63"N	Yes
45	Dead	Dead	117°37'61"W 34°43'64"N	No
46	12-foot	Good, 1-trunk	117°37'59"W 34°43'65"N	No
47	20-foot	Poor, 1-trunk, dying	117°37'57"W 34°43'68"N	Yes
48	7-foot	Good, 1-trunk	117°37'58"W 34°43'69"N	No
49	1-foot	Good, 1-trunk	117°37'58"W 34°43'70"N	No
50	18-foot	Good, 1-trunk	117°37'54"W 34°43'69"N	Yes

51	8-foot	Good, 1-trunk	117°37'54"W 34°43'69"N	No
52	20-foot	Good, 1-trunk	117°37'52"W 34°43'67"N	Yes
53	4-foot	Good, 1-trunk, leaning	117°37'53"W 34°43'68"N	No
54	4-foot	Poor, 1-trunk, broken crown, yellow	117°37'51"W 34°43'72"N	No
55	4-foot	Good, 1-trunk	117°24'60"W 34°24'46"N	No
56	Dead	Dead	117°37'37"W 34°43'66"N	No
57	1, 2, and 3-foot	Good, 3-trunks, clonal	117°37'35"W 34°43'71"N	No
58	18-foot	Moderate, 1-trunk	117°37'49"W 34°43'62"N	No
59	15-foot	Moderate, 1-trunk, crown broken	117°37'54"W 34°43'60"N	Yes

Blue Highlight: Suitable for relocation according to CDFW parameters.

Yellow Highlight: Largest trees, if possible, preserve in place to reduce mitigation obligation.

****Panicle:*** A panicle (bloom/cluster of flowers) is a compound inflorescence , formed by a cluster of racemes on a single axis.

Criteria for Relocation

Each Western Joshua tree was evaluated for suitability of potential relocation and transplanting based on the following criteria which is provided on research completed by California Department of Fish and Wildlife:

- Trees from approximately 2-foot in height to approximately 12-foot.
- No visible sign of damage to the tree such as absence of bark due to rodents, vandalism, etc.
- Tree has minimal number of branches (between 2-3 branches).
- Tree is not excessively leaning.
- Tree does not have yellow or brown fronds.
- Proximity to other Western Joshua trees (i.e., clonal).
- Tree does not have exposed roots at the base.
- Presence of branches with panicles.

4.1.2 Special-Status Wildlife Species

Focused surveys were performed for the three special-status wildlife species that were determined to have the highest probability of occurrence at the Project Site. The results of each of these focused surveys is presented below. The full reports for each species can be found in Appendix G.

Western Burrowing Owl

The Survey Area is within the historic range of Western burrowing owl((*Athene cunicularia,* SSC) and has **high** potential to support this species. During the habitat assessment it was determined that focused surveys should be performed. Western burrowing owl is a locally significant species within San Bernardino County. During the habitat assessment several burrows were noted of appropriate size to support this species at the Project Site. CASC's biologist performed a habitat assessment on April 27 and May 2, 2022 and noted several burrows of appropriate size to support burrowing owl (Figure 6). The biologist walked transects and were able to visually assess 100% of the Project Site. Focused surveys were performed on June 2 and 27, July 20, and August 10, 2022. No scat, pellets, or other sign was observed within the Survey Area during any of the surveys. Refer to Appendix G for the full focused survey report for BuOw.

Mohave Ground Squirrel

The Survey Area is within the historic range of the Mohave ground squirrel (*Xerospermophilus mohavensis*, State Threatened). Its historical range encompasses an area between Antelope Valley and Lucerne Valley, in the south (Gustafson 1993). However, Mohave ground squirrel occurrences in the southern portion of its range are very unusual. The northern limits of the range are near Owens Dry Lake-bed, in the north, and through China Lake Naval Weapons Station and Fort Irwin Military Base in the east (Gustafson 1993). The eastern limit of the species range extends to Barstow and south along the Mojave River. The western limits loosely follow State Highway 14 and the foothills of the southern Sierra Nevada escarpment (Gustafson 1993). Several other common squirrels occur within their range; antelope ground squirrel (*Ammospermophilus leucurus),* round-tailed ground squirrel (*Xerospermophilus tereticaudus*) and the California ground squirrel (*Spermophilus beecheyi*).

Habitat conditions on the Project Site are suitable for Mohave ground squirrel and it was determined during the habitat assessment that this species has **moderate** potential of occurrence. Focused surveys were conducted for this species with a total of three trapping sessions which occurred during April 5-9, May 23-27, and June 14-18, 2022. Mohave ground squirrel was not captured during the protocol level sessions and is not expected to occur at the Project Site. Mohave ground squirrel were not captured in the Project Site or within any census grids during any of the three live trapping sessions. This species is considered **absent** from the Project Site. Only the antelope ground squirrel and California ground squirrel were trapped within the grid. Refer to Appendix G, focused survey report prepared by Phillipe Vergne, Senior Biologist, Envira for the full focused survey report and additional details for this species. Mr. Vergne has a Memorandum of Understanding with CDFW to trap Mohave ground squirrel (SC-002835) and is included in Appendix G.

Desert Tortoise

The desert tortoise (*Gopherus agassizii,* Federal Threatened/State Threatened) is a desert dwelling reptile that occurs throughout the Mojave and Sonoran deserts. It is found in California, Nevada and Utah, occurring in almost every type of habitat except dry lakes or playas, sand dunes and sand sheets and rocky slopes. Habitat is marginal at the Project Site for this species and it was determined that the Survey Area has **low** potential to support desert tortoise. While suitable habitat is present in the Survey Area, it is outside of the current known range for this species. Further, desert tortoise has not been recorded near the Project Site for many years. The local desert tortoise population has undergone severe declines over time. Focused surveys were performed on April 8-9, 2022 by Philippe Vergne, Senior Biologist, Envira. Desert tortoise surveys were conducted according to USFWS protocol by covering the entire project site by walking east to west transects ten meters apart, and the zone of influence. The zone of influence (ZOI) includes parallel transects of 100, 300, 600, 1,200 and 2,400-feet for tortoises. The zone of influence was completed until being bisected by the Canal, fencing, development and private property boundaries. During the focused surveys no sign (scat, burrows, etc.) of this species was noted and this species is not expected to occur at the Project Site. This species is considered **absent** from the Project Site Refer to Appendix G, focused survey report prepared by Phillipe Vergne, Senior Biologist, Envira for the full focused survey report and additional details for this species.

4.2 NESTING BIRDS AND WILDIFE MOVEMENT

Shrubs and Western Joshua tree located within the Survey Area provide nesting habitat for a number of nesting bird species. Several nests of cactus wren (*Campylorhynchus brumeicapillus)* were found during the site survey. Other avian species with potential to nest on the Project Site included mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), and house finch (*Carpodacus mexicanus*). Turkey vulture (*Cathartes aura*) was also noted during the survey and can utilize the site for foraging and thermoregulation. Black-tailed jackrabbit (*Lepus californicus*) is expected to nest and forage on site. And coyote (*Canis latrans*) was observed foraging as evidenced by the presence of sign (scat and tracks). The site is undeveloped as are the adjacent properties. It is possible that wildlife moves readily throughout the site to access adjacent habitat.

4.3 SPECIAL-STATUS VEGETATION COMMUNITIES

The vegetation community within the Survey Area was identified as *Larrea tridentata-Ambrosia dumosa* Shrubland Alliance with scattered western Joshua trees. Species identified within this community include smoke trees (*Cotinus* sp.), species in the Agavacea family, mesquite (*Prosopis* sp.), large creosote bushes (*Larrea* sp.), Western Joshua trees, and any other plants are protected by the *State Desert Native Plant Act*. As such, any impacts to these sensitive natural

communities may be considered significant under CEQA and require further mitigation to ensure compliance with the federal, State, and local regulations. These mitigation requirements are typically determined during the CEQA review and approval process. Mitigation to address any potential impacts is discussed below in Section 5.1 Special Status Plant Species/Vegetation Communities.

4.4 REGIONAL CONNECTIVITY

Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. The County identifies Wildlife Corridors and Areas of Critical Environmental Concern in their open space element of the General Plan. Wildlife movement corridors are defined as areas that connect suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, changes in vegetation, or human disturbance. A wildlife corridor is generally represented by a linear patch of habitat that provides a connection between two core areas of the same habitat, allowing for the large-scale movement of species within their native habitats. Natural features such as canyon drainages, ridgelines, or areas with vegetation cover provides corridors for wildlife travel. Wildlife movement corridors are important because they provide access for breeding opportunities, food, and water; allow the dispersal of individuals away from high population density areas; and facilitate the exchange of genetic traits between populations.

The Project Site is not identified within the San Bernardino County General Plan as a Wildlife Corridor or Linkage, San Bernardino County Corridor Locations. The County identifies Wildlife Corridors and Areas of Critical Environmental Concern in their open space element of the General Plan. Further, the Project Site is bound on the east by Amargosa Road and I-15, to the south by Palmetto Way and an industrial complex, to the north by Avenal Street and fenced residential housing, leaving only the western project boundary open for wildlife to access the site. Thus, not providing adequate access or cover to provide significant wildlife movement through the site.

4.5 CRITICAL HABITAT

USFWS-designated critical habitats (proposed or final) have not been mapped within the Survey Area. The closest critical habitat is northeast and southeast of Project Site Palms (Figure 4). There is no critical habitat within the near vicinity of the Project Site, therefore, no critical habitat will be impacted by Project development.

4.6 JURISDICTIONAL FEATURES ANALYSIS

Given that the Project Site is located in the arid to semi-arid desert region, the Survey Area was assessed more specifically for ephemeral features (watercourses that flow only during and shortly after precipitation events). There are no blueline drainages or other jurisdictional features were noted on the Project Site. The National Wetlands Inventory Mapper did not identify any non-

wetlands, wetlands, or other jurisdictional features within the Survey Area. Oro Grande Wash is to the west of the Project Site and the California Aqueduct is to the south. Both of these features are well outside of the 500-foot buffer area. Further, CASC biologists did not note any such features on the Project Site or within the buffer area (Appendix F).

Section 5 Conclusion and Recommendations

CEQA requires Project proponents to analyze and disclose potential environmental impacts associated with Project development. Any potentially significant impact must be mitigated to the extent feasible. CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a project that the agency will carry out, fund, or approve. Any potentially significant impact must be mitigated to the extent feasible. Impacts to special-status species designated as endangered, threatened, rare, or a candidate species would require disclosure under CEQA. Impacts to SSC species are not considered significant under CEQA and warrant no legal protection but may simply require CEQA disclosure.

The following is conclusions and recommendations are intended to provide best management practices for Project development, provide guidance for local, State, and federal guidelines and protect natural resources.

5.1 SPECIAL STATUS PLANT AND VEGETATION COMMUNITIES

Based on the results of the focused surveys and a review of specific habitat preferences, occurrence records, known distributions, focsued survey results, and elevation ranges, it was determined that the Project Site is very unlikely to support any special-status plant species other than Western Joshua Tree.

The Western Joshua tree is a candidate species in the initial stages of consideration for listing as threatened under the California Endangered Species Act (CESA) [Office of Administrative Law's Notice ID #Z2019-1112-01 and Z2020-0924-01 Petition to list Western Joshua Tree (*Yucca brevifolia*) as a Threatened Species]. CDFW regulates all “take” of listed or candidate species. In preparation for Project development, an Incidental Take Permit (ITP) application will need to be completed with supporting documentation and an application fee paid to CDFW.

5.1.1 Avoidance and Minimization Measures

The following avoidance and minimization measure is recommended to reduce potential impacts and lessen mitigation obligation for special-status Western Joshua tree woodland to a less than significant level. Mitigation can consist of avoidance, removal, on-site relocation, off-site relocation, and purchase of credits in a CDFW approved mitigation bank. In the instance of relocation of Western Joshua tree, the Project proponent will be responsible for preparation of long-term maintenance, monitoring, watering, and weeding plan to ensure the health of the transplanted tree, the placement of fencing and signage around transplanted trees, and if requested by CDFW, an endowment to maintain the relocated trees. Purchase of credits in a CDFW approved mitigation bank can be an option once bank approval is finalized.

San Bernardino County Countywide Plan Policy NR-5.6 Mitigation Banking supports the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. The County does require public and private conservation lands or mitigation banks to ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.

BIO-1: Incidental Take Permit from CDFW

An Incidental Take Permit (ITP) application and supporting documentation shall be submitted to CDFW for review and approval for removal of Western Joshua trees on the Project Site. An ITP establishes a performance standard requiring that the impacts be "minimized and fully mitigated" with "measures that are roughly proportional in extent to the impact of the authorized taking on the species." [2] Therefore, additional mitigation measures, such as the purchase of credits from an approved conservation or mitigation bank, land acquisition, or entry into a conservation easement, will be determined in consultation with CDFW to meet ITP requirements. Because the Western Joshua tree was designated as a candidate species in October 2020 and is still subject to a status review by CDFW, it is impractical to determine the specific details of mitigation, beyond compliance with the ITP.

A completed application requires a completed CEQA document to accompany the ITP application and fee. CDFW requires the CEQA document have a state clearing house number, show proof of filing fees, and that the document has been circulated. CDFW will then review the ITP and CEQA document and make a determination of mitigation.

BIO-2: Desert Native Plant Protection and Relocation Plan

A *Desert Native Plant Protection and Relocation Plan* (Plan) for the proposed Project shall be composed that will provide detailed specifications for the proposed treatment, avoidance, or relocation of all smoke trees (*Cotinus* sp.), species in the Agavacea family, mesquite (*Prosopis* sp.), large creosote bushes (*Larrea* sp.), Western Joshua trees, and any other plants protected by the State Desert Native Plant Act. Further, the Protected Desert Plant Plan will provide measures to meet the requirements of Chapter 16.24 of the City of Hesperia's (City) Municipal Code to protect, preserve, and mitigate impacts to Western Joshua tree. The City's Protected Plant Policy (HMC 16.24) states the following for commercial and industrial projects:

[2] Fish & G. Code § 2081(b); Cal. Code Regs., tit. 14, §§ 783.2-783.8

- The Plan shall be certified by an arborist or registered botanist.
- An application and fee shall be completed and paid to the City of Hesperia.
- Healthy, transplantable Western Joshua trees shall be relocated on-site or may be placed in an adoption program.

The *Desert Native Plant Protection and Relocation Plan* will address requirements of the City's Protected Plant Policy and provide details from the initial survey of the site's Western Joshua trees and other sensitive desert plant species, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees or bushes requiring removal and relocation. Specifically, the Plan will include site location and characteristics; relocation requirements including Western Joshua tree and other sensitive desert plant species report and removal/relocation and transplanting specifics; success criteria and associated necessary fees, protective measures prior to, during and after construction, and maintenance after construction.

5.2 SPECIAL-STATUS WILDLIFE SPECIES

Based on the results of the focused surveys and current site conditions, a review of specific habitat preferences, historical occurrence records, known distributions, and habitat associations, it was determined that Project development will not result in the loss of individual Mohave ground squirrels or desert tortoise, nor will development adversely affect local or regional populations of these species.

Burrowing owl have a high probability of occurrence at the Project Site. While no burrowing owl were observed at the time of the site visit, this species is transient and has the potential to occupy the Project Site prior to development. The followig recommendations are provided to ensure that no impacts occur to burrowing owl.

5.2.1 Avoidance and Minimization Measures

Based on the results of the field survey and a review of specific habitat preferences, occurrence records, known distributions, and elevation ranges, it was determined that the Survey Area has a high potential to support Western burrowing owl (SSC and locally significant within the County of San Bernardino).

To ensure there are no impacts to burrrowing owl, it is recommended that a one-day site visit by a qualified biologist be performed within 14-30 days of project construction or ground breaking activities. If burrowing owl are observed at this time CDFW will be contacted to collaborate on methods to remove or discourage owls from occupying the site.

BIO-3: Pre-Construction Western Burrowing Owl Clearance Surveys

In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), two (2) pre-construction clearance surveys should be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities. Once surveys are completed, the qualified biologist shall prepare a final report documenting surveys and findings. If no burrowing owls or occupied burrows are detected, Project construction activities may begin. If an occupied burrow is found within the Project Site during pre-construction clearance surveys, a burrowing owl exclusion and mitigation plan shall be prepared and submitted to the County, which may consult with CDFW for review, prior to initiating Project construction activities.

BIO-4: Passive and Active Relocation of Western Burrowing Owls

If Western burrowing owls are observed on the Project Site during preconstruction surveys, CDFW shall be immediately notified to determine if avoidance of the nest is appropriate until the nest is vacated or to gain concurrence from CDFW on active or passive relocation actions. All passive or relocation activities shall be in concurrence with CDFW guidelines (Staff Report on Burrowing Owl Mitigation 2012).

If burrowing owls are present and nesting on-site the following steps shall be necessary to reduce impacts to less than significant. These steps may be augmented by recommendations from CDFW:

a. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by CDFW verifies through non-invasive methods that: (1) owls have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
b. A qualified biologist shall exclude all owls from active burrows using one-way doors. Concurrently, all inactive burrows and other sources of secondary refuge for burrowing owls shall be collapsed and removed from the site.
c. Following and 24 to 48-hour observation period, all vacated burrows shall be collapsed.
d. A qualified biologist shall conduct a post-exclusion survey confirming the absence of burrowing owls on the Project Site. Should newly occupied burrows be discovered on the Project Site the exclusion activities shall be repeated.

5.3 NESTING BIRDS AND WILDLIFE MOVEMENT

The Survey Area is surrounded by undeveloped land to the west, and development land to the north, south, and east. Implementation of the Project will not inhibit wildlife from moving to adjacent open space which surrounds the Project Site to the west. Suitable bird nesting habitat

is present (although limited) throughout the Project Site and buffer area. It is recommended to conduct a one-day site assessment for nesting birds within 7-days of project construction or ground-breaking activities. This can be performed concurrently with the burrowing owl site assessment mentioned above.

5.3.1 Avoidance and Minimization Measures

Pursuant to the MBTA (16 U.S. Government Code [USC] 703) of 1918, as amended in 1972, federal law prohibits the taking of migratory birds or their nests or eggs (16 USC 703; 50 CFR 10, 21). The following avoidance and minimization measure is recommended to reduce potential impacts to nesting birds to a less than significant level.

Impacts to special-status species designated as endangered, threatened, rare, or a candidate species would require disclosure under CEQA. Impacts to SSC species are not considered significant under CEQA and warrant no legal protection but may simply require CEQA disclosure.

BIO-5: Nesting Bird Preconstruction Surveys

If it is not feasible to avoid the nesting bird season (typically January through July for raptors and February through August for other avian species), a qualified biologist shall conduct a pre-construction nesting bird survey for avian species to determine the presence/absence, location, and status of any active nests on or directly adjacent to the Project Site. If active nests are located, the extent of the survey buffer area surrounding the nest should be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and the CFGC, the nesting bird survey shall occur no earlier than seven (7) days prior to the commencement of construction.

In the event that active nests are discovered, a suitable buffer (distance to be determined by the biologist) shall be established around such active nests, and no construction within the buffer allowed, until the biologist has determined that the nest(s) is no longer active (i.e., the nestlings have fledged and are no longer reliant on the nest).

5.4 REGIONAL CONNECTIVITY

The Project Site does not serve as a wildlife corridor. Therefore, no impacts to regional connectivity or wildlife corridors will occur due to Project development.

5.5 CRITICAL HABITAT

There is no USFWS-designated critical habitat mapped within the Survey Area. Therefore, no impacts to critical habitat are expected to occur as a result of the Project, and no further recommendations or avoidance and minimization measures are warranted.

5.6 JURISDICTIONAL FEATURES ANALYSIS

There are no wetland, waters, or other jurisdictional features on the Project Site. Therefore, no additional surveys or assessments will be recommended and no impacts to jurisdictional features will occur due to Project development.

5.7 CONCLUSION

To the best of our knowledge, this Report is intended to identify additional needs relating to field studies and possible constraints associated with Project development. All figures and species lists were created specifically for this Project and reflect site conditions at the time of the site assessment and focused surveys. Focused surveys for plants and wildlife were performed for this report and can be found in Appendix G.

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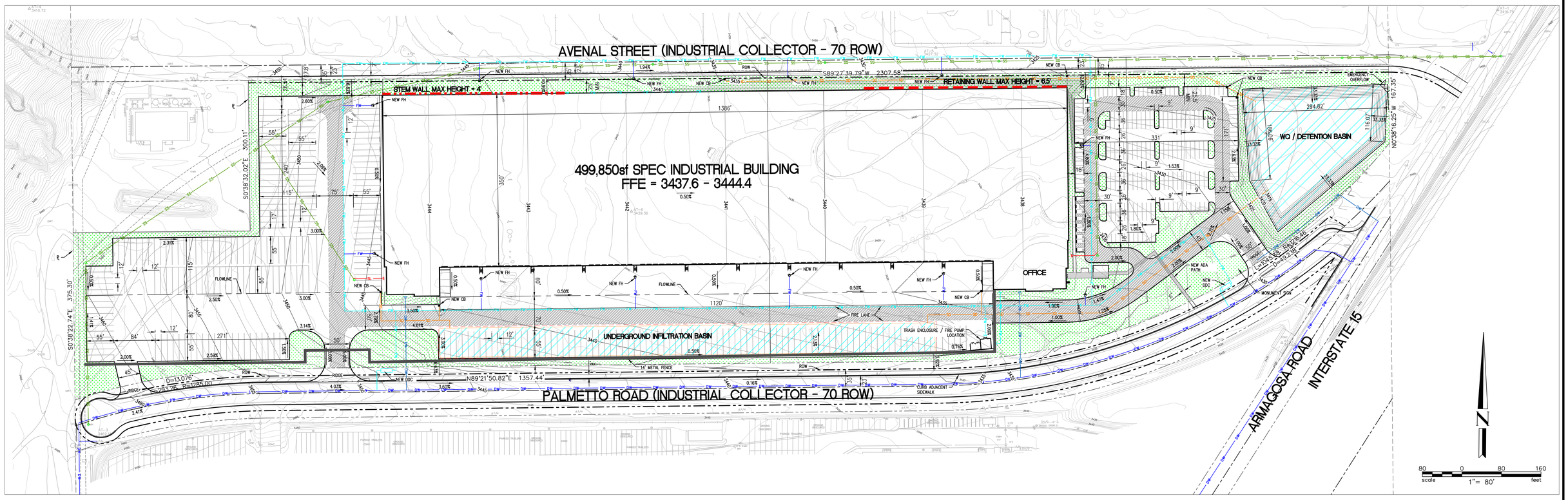
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Appendix A

Conceptual Plans

HESPERIA SPEC INDUSTRIAL
SITE PLAN EXHIBIT
COUNTY OF SAN BERNARDINO



OWNER

RACHAMIN 5, LLC
6001 EAST SLAUSSON AVENUE
COMMERCE, CA 90040
TEL: (213) 769-4222 X107

CONTACT: RAMIN NAMVAR

ARCHITECT

RGA
15231 ALTON PARKWAY, SUITE 100
IRVINE, CA 92618
(949) 341-0923

CONTACT: CHRIS SAVAGE

CIVIL ENGINEER

WESTLAND GROUP, INC.
4150 CONCOURS STREET,
SUITE 100
ONTARIO, CA 91764
(909) 403-5647

CONTACT: MATT KUNKLE

UTILITY PURVEYORS

SCE
PO BOX 6400
RANCHO CUCAMONGA, CA
91729
(760) 951-3253
ATTENTION: JERIMON ROMERO

SOUTHWEST GAS CO.
13471 MARIPOSA ROAD
VICTORVILLE, CA
(760) 951-4053
ATTENTION: DIANE REICHLE

VERIZON
16071 MOHAVE DR BLDG A
VICTORVILLE, CA 92395
(800) 483-3000
ATTENTION: CHRIS THORPE

CITY OF HESPERIA, WATER DIST.
9700 SEVENTH AVE.
HESPERIA, CA 92345
(760) 947-1417

CITY OF HESPERIA, SEWER
9700 SEVENTH AVE.,
HESPERIA, CA 92345
(760) 947-1417

CHARTER COMMUNICATIONS
9536 "C" AVE
VICTORVILLE, CA
(866) 499-8080

LEGAL DESCRIPTION

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL 1:
PARCELS 3 AND 4 OF PARCEL MAP 14386, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 181, PAGES 62 AND 63 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 2:
PARCEL 2 OF PARCEL MAP 17599, IN THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 213, PAGES 54 AND 55 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN 0405-072-52-0-000; 0405-072-53-0-000; 0405-072-55-0-000

PROJECT EARTHWORK DATA

2D GRADING AREA: 170,140 SQ.YD.
CUT: 95,800 CY
FILL: 96,100 CY
NET: 300 CY
NOTE: ALL QUANTITIES ARE UNADJUSTED

HYDROLOGY SUMMARY						
AREA ID	AREA (AC)	TC (MIN)	Q_{100} (CFS)	V_{120} (CF)	Retention Provided (CF)	Total V Provided (CF)
A	6.29	10	16.5	117,301	600,000	600,000 min
B	19.08	10	50.2	379,213		
C	6.22	10	15.9	81,068		
TOTAL	31.59		82.9	582,327		

BASIN SUMMARY TABLE		
BASIN ID	RETENTION VOLUME	TOTAL VOLUME
ABOVE GROUND BASIN	295,000 CF	295,000 CF min
UNDERGROUND INFILTRATION BASIN	305,000 CF	305,000 CF min
TOTAL	600,000 CF	600,000 CF min

EASEMENT NOTES

ITEM A, B & C PERTAIN TO TAX MATTERS

1. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
2. EASEMENT(S) IN FAVOR OF THE PUBLIC OVER ANY EXISTING ROADS LYING WITHIN SAID LAND.
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
3. THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,
   RECORDING DATE: DECEMBER 31, 1948
   RECORDING NO: IN BOOK 2342, PAGE 152 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.
4. THE OWNERSHIP OF SAID LAND DOES NOT INCLUDE RIGHTS OF ACCESS TO OR FROM THE STREET, HIGHWAY, OR FREEWAY ABUTTING SAID LAND, SUCH RIGHTS HAVING BEEN RELINQUISHED BY THE DOCUMENT,
   RECORDING DATE: MAY 10, 1961
   RECORDING NO: IN BOOK 5426, PAGE 35 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.
5. WAIVER OF ANY CLAIMS FOR DAMAGES TO SAID LAND BY REASON OF THE LOCATION, CONSTRUCTION, LANDSCAPING OR MAINTENANCE OF THE STREET OR HIGHWAY ADJOINING SAID LAND, AS CONTAINED IN THE DEED TO COUNTY/CITY/STATE: STATE OF CALIFORNIA
   RECORDING DATE: MAY 10, 1961
   RECORDING NO.: IN BOOK 5426, PAGE 35 OFFICIAL RECORDS
   DOES NOT AFFECT SUBJECT PROPERTY.
6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   DISCLOSED BY: NOTICE OF LIS PENDENS
   CASE NO: 144429
   COURT: SUPERIOR COURT
   PURPOSE: WATER PIPELINE SYSTEM
   RECORDING DATE: MAY 17, 1971
   RECORDING NO: IN BOOK 7669, PAGE 97 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY
   PURPOSE: PUBLIC UTILITIES AND ACCESS
   RECORDING DATE: MARCH 13, 1987
   RECORDING NO: AS INSTRUMENT NO. 1987-081745 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
   DOES NOT AFFECT SUBJECT PROPERTY.

EASEMENT NOTES (CONTINUED)

8. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
   GRANTED TO: HESPERIA WATER DISTRICT
   PURPOSE: PIPELINE(S) AND PUBLIC PURPOSES AND INGRESS AND EGRESS
   RECORDING DATE: AUGUST 11, 1992
   RECORDING NO: AS INSTRUMENT NO. 1992-333349 OFFICIAL RECORDS
   AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT
9. THE LAND DESCRIBED HEREIN IS INCLUDED WITHIN A PROJECT AREA OF THE REDEVELOPMENT AGENCY SHOWN BELOW, AND THAT PROCEEDINGS FOR THE REDEVELOPMENT OF SAID PROJECT HAVE BEEN INSTITUTED UNDER THE REDEVELOPMENT LAW (SUCH REDEVELOPMENT TO PROCEED ONLY AFTER THE ADOPTION OF THE REDEVELOPMENT PLAN) AS DISCLOSED BY A DOCUMENT.
   REDEVELOPMENT AGENCY: HESPERIA COMMUNITY REDEVELOPMENT AGENCY
   RECORDING DATE: JULY 21, 1993
   RECORDING NO: AS INSTRUMENT NO. 1993-310136 OFFICIAL RECORDS
   AND RECORDING DATE: DECEMBER 03, 2007
   AND RECORDING NO: AS INSTRUMENT NO. 2007-0676018 OFFICIAL RECORDS
   BLANKET IN NATURE, CAN NOT BE PLOTTED.
10. VARIOUS MATTERS INCLUDING, BUT NOT LIMITED TO, REQUIREMENTS FOR DEVELOPING OR IMPROVING THE LAND, PROPOSED EASEMENTS, COVENANTS, CONDITIONS, RESTRICTIONS AND PROVISIONS SET FORTH ON PARCEL MAP 14386, IN BOOK 181, PAGES 62 AND 63 OF PARCEL MAPS.
    REFER TO ITEMS 8 & 12.
11. AGREEMENT FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS
    RECORDING DATE: FEBRUARY 07, 1997
    RECORDING NO: AS INSTRUMENT NO. 19970044707 OFFICIAL RECORDS
    BLANKET IN NATURE, CAN NOT BE PLOTTED
12. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO, AS GRANTED IN A DOCUMENT:
    GRANTED TO: SOUTHERN CALIFORNIA EDISON COMPANY
    PURPOSE: OVERHEAD ELECTRICAL SUPPLY SYSTEMS AND COMMUNICATION SYSTEMS AND APPURTENANCES
    RECORDING DATE: NOVEMBER 01, 2006
    RECORDING NO: AS INSTRUMENT NO. 2006-0746828 OFFICIAL RECORDS
    AFFECTS: A PORTION OF SAID LAND AS MORE PARTICULARLY DESCRIBED IN SAID DOCUMENT

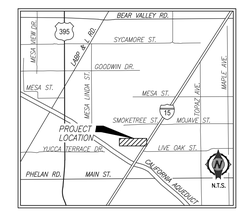
ITEM 13 THROUGH 19 PERTAIN TO TITLE MATTERS

LEGEND

- DOMESTIC WATER LINE — DW
- SANITARY SEWER — SS
- FIRE WATER LINE — FW
- STORM DRAIN LINE — SD
- FIRE HYDRANT
- STREET LIGHT
- PROPERTY LINE
- LANDSCAPE
- SEWER LATERAL
- RETAINING WALL
- STEM WALL
- INFILTRATION BASIN
- NEW SIDEWALK
- FIRE LANE

PROJECT SITE DATA

APPROX. NET INDUSTRIAL SITE AREA:	1,329,521 SF / 30.52 AC
BUILDING AREA:	499,850 SF
COVERAGE:	37.6 %
F.A.R.	0.376
AUTO PARKING REQUIRED:	
10,000 SF OFFICE @ 3.33 / 1000 SF	33 STALLS
489,720 SF WAREHOUSE: 20+0.4/1000 O/10K SF	212 STALLS
TOTAL	245 STALLS
PARKING PROVIDED:	
STANDARD STALLS	244 STALLS
ACCESSIBLE STALLS	7 STALLS
TOTAL STALLS PROVIDED	251 STALLS
DOCK LOADING POSITIONS	72 DOCKS
TRAILER PARKING STALLS	256 TRAILERS
LANDSCAPE PROVIDED	255,000 SF / 19.1 %



VICINITY MAP
N.T.S

WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
14150 Concours Street Suite 100, Ontario, CA 91764
Phone: (909) 989-9789 Fax: (909) 989-9660

CITY OF HESPERIA
SPEC INDUSTRIAL
SITE PLAN EXHIBIT

DRAWN BY:	LG
DESIGNED BY:	MK
CHECKED BY:	MK
SCALE:	1" = 80'
DATE:	JULY 2022
SHT NO.:	1 OF 1

Drawing Name: P:\Proj_2021\2021-168 - Hesperia Industrial - RGA - Chris Savage\06 Engineering\Sheets\CONCEPTUAL\Site Plan Exhibit\01_2021-168_SP.dwg
Last Opened: Jul 14, 2022 - 9:17am by lucas.glauser

Appendix B

Representative Site Photographs



Photograph 1. Looking East across Project Site.



Photograph 2. Looking South at existing building which is off-site.



Photograph 3. Looking Northwest at adjacent off-site utilities.



Photograph 4. Looking Northwest.



Photograph 5. Looking Southeast.



Photograph 6. Looking Southwest.



Photograph 7. Looking North.



Photograph 8. Looking Northeast. This is the largest Joshua tree on the Project Site. Avenal Street is in the background.

Appendix C

Plant Compendia

APPENDIX C

Plant Compendia

The following vascular plant species were observed by CASC at the Palmetto Way Industrial Spec Project Site in Hesperia, California during April – July 2022.

*Indicates introduced nonnative species

SPECIES/SCIENTIFIC NAME	FAMILY/COMMON NAME
ANGIOSPERMAE	***FLOWERING PLANTS***
ASTERACEAE (COMPOSITAE)	*SUNFLOWER FAMILY*
Ambrosia dumosa	common burrobrush
Ambrosia salsola	cheesebrush
Artemisia tridentata	sagebrush
Chaenactis fremontii	Fremont's pincushion
Ericamaria nauseosa	rubber rabbitbush
Eriophyllum conferitflorum	golden yarrow
Geraea canescens	desert sunflower
Gutierrezia microcephala	sticky snakeweed
Stephanomeria pauciflora	desert wirelettuce
Tetradymia axillaris	cottonthorn
BORAGINACEAE	*BORAGE FAMILY*
Amsinckia intermedia	*common fiddleneck*
Amsinckia retrorsa	*rigid fiddleneck*
BRASSICACEAE	*MUSTARD FAMILY*
*Hirschfeldia incana **	shortpod mustard
CACTACEAE	*CACTUS FAMILY*
Cylindropuntia echinocarpa	silver cholla
CHENOPODIACEAE	*GOOSEFOOT FAMILY*
Atriplex canescens	hoary saltbush
Grayia sinosa	*hop sage*
Suaeda nigra	bush seepweed
CUPRESSACEAE	*CYPRESS FAMILY*
Juniperus californica	California juniper

SPECIES/SCIENTIFIC NAME	FAMILY/COMMON NAME
EPHEDRACEAE	*EPHEDRA FAMILY*
Ephedra californica	desert tea
GERIANIACEAE	*GERANIUM FAMILY*
*Erodium cicutarium**	long-beaked filaree
LAMIACEAE (LABIATAE)	*MINT FAMILY*
Salvia dorrii	desert sage
LILIACEAE	*LILY FAMILY*
Yucca brevifolia	Joshua tree
NYCTAGINACEAE	*NIGHTSHADE FAMILY*
Mirabilis laevis	*desert wishbone bush*
ONAGRACEAE	*SUNCUP FAMILY*
Eremothera boothii	*Booth's suncup*
PLANTAGINACEAE	*PLANTAIN FAMILY*
Plantago ovata	*desert plantain*
POLYGONACEAE	*BUCKWHEAT FAMILY*
Eriogonum plumatella	flatopped buckwheat
Eriogonum fasciculatum	California buckwheat
Eriogonum wrightii	bastard sage
PRIMULACEAE	*PRIMROSE FAMILY*
Eremothera boothii ssp. *decorticans*	*desert shredding primrose*
RHAMNACEAE	*BUCKTHORN FAMILY*
Ceanothus leucodermis	chaparral whitethorn
ROSEACEAE	*ROSE FAMILY*
Purshia tridentata	antelope bitterbrush
SOLANACEAE	*NIGHTSHADE FAMILY*
Lycium cooperii	Cooper's box-thorn
ZYGOPHULLACEAE	*CALTROP FAMILY*
Larrea tridentata	creosote bush
MONOCOTYLEDONES	***MONOCOTS***
POACEAE	*GRASS FAMILY*
*Bromus rubens**	red brome
Bromus tectorum	cheat grass
*Poa secunda **	perennial bluegrass

Schismus barbatus	Mediterranean grass

Floral compendia identified during surveys were recorded in terms of relative abundance and host habitat type. Floral taxonomy used in this report follows the *Jepson Manual* (Hickman 1993) and for sensitive species, the *California Native Plant Society Rare Plant Inventory*, 5th Edition (Pavlik and Skinner 1994). Additional common plant names are taken from Munz (1974) and Sawyer and Keeler-Wolf (2009)

Appendix D

Wildlife Compendia

APPENDIX D

Wildlife Compendia

The following is a list of wildlife species recorded aby CASC at the Palmetto Way Industrial Spec Project Site in Hesperia, California April – July 2022. Presence may be noted if a species is seen or hears, or identified by the presence of tracks, scat, or other sign.

*Indicates introduced nonnative species

SPECIES/SCIENTIFIC NAME	COMMON NAME
REPTILIA	***REPTILES***
IGUANIDAE	*IGUANID LIZARDS*
Uta stansburiana	side-blotched Lizard
Aspidoscelis tigris tigris	basin whiptail
Xantusia vigilis	desert night lizard
AVES	***BIRDS***
COLUMBIDAE	*PIGEONS AND DOVES*
Zenaida macroura	mourning dove
CORVIDAE	*CROWS AND RAVENS*
Corvus brachyrhunchos	American crow
Corvus corax	common raven
TROGLODYTIDAE	*WRENS*
Campylorhynchus brumeicapillus	*cactus wren*
FRINGILLIDAE	*FINCHES*
Eremophila alpestris	horned lark
LANIIDAE	SHRIKES
Lanius ludovicianus	*loggerhead shrike*
TYTONIDAE	*OWLS*
Tyto alba	barn owl
MAMMALIA	***MAMMALS***
LEPORIDAE	*RABBITS AND HARES*
Lepus californicus	black-tailed jackrabbit
CANIDAE	*DOGS, FOXES, AND ALLIES*
Canis latrans	coyote (scat and tracks)
SCIURIDAE	SQUIRREL FAMILY
Ammospermophilus leucurus	White-tailed antelope squirrel
HETEROMYIDAE	K-RAT, K-MICE, POCKET MICE FAMILY
Dipodomys sp.	kangaroo rat

Taxonomy and nomenclature follows Beher (1998) and Laudenslayer et.al. (1991. A checklist of the amphibians, reptiles, birds, and mammals of California. California Fish and Game 77:109-141.), Sibley (2000) and the American Ornithologists' Union (1998. The A.O.U. Checklist of North American Birds, 7th Ed. American Ornithologists' Union, Washington D.C.

Appendix E

CNDDB Summary Table and BIOS

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Baldy Mesa (3411744) OR Hesperia (3411743) OR Shadow Mountains SE (3411755) OR Adelanto (3411754) OR Victorville (3411753) OR Phelan (3411745) OR Telegraph Peak (3411735) OR Cajon (3411734) OR Silverwood Lake (3411733))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Accipiter cooperii Cooper's hawk	G5 S4	None None	CDFW_WL-Watch List IUCN_LC-Least Concern	2,860 3,361	118 S:2	0	0	0	0	0	2	2	0	2	0	0
Agelaius tricolor tricolored blackbird	G1G2 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	2,665 2,665	955 S:1	0	0	0	0	0	1	0	1	1	0	0
Anaxyrus californicus arroyo toad	G2G3 S2S3	Endangered None	CDFW_SSC-Species of Special Concern IUCN_EN-Endangered	2,530 3,590	139 S:14	5	2	0	0	0	7	5	9	14	0	0
Antrozous pallidus pallid bat	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	2,820 2,820	420 S:1	0	0	0	0	0	1	0	1	1	0	0
Aquila chrysaetos golden eagle	G5 S3	None None	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected CDFW_WL-Watch List IUCN_LC-Least Concern	2,760 2,760	325 S:1	0	0	0	0	0	1	1	0	1	0	0
Artemisiospiza belli belli Bell's sage sparrow	G5T2T3 S3	None None	CDFW_WL-Watch List	2,782 2,782	61 S:1	0	0	0	0	0	1	0	1	1	0	0
Asclepias nyctaginifolia Mojave milkweed	G4? S2	None None	Rare Plant Rank - 2B.1		67 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Asio otus long-eared owl	G5 S3?	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	3,220 3,880	56 S:2	0	0	0	0	0	2	2	0	2	0	0
Aspidoscelis tigris stejnegeri coastal whiptail	G5T5 S3	None None	CDFW_SSC-Species of Special Concern	2,767 2,767	148 S:1	0	0	1	0	0	0	0	1	1	0	0
Astragalus lentiginosus var. antonius San Antonio milk-vetch	G5T2 S2	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive	5,000 6,200	12 S:3	0	1	0	0	0	2	1	2	3	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	100 3,700	2011 S:39	1	15	13	6	2	2	4	35	37	1	1
Batrachoseps gabrieli San Gabriel slender salamander	G2G3 S2S3	None None	IUCN_DD-Data Deficient USFS_S-Sensitive	3,600 4,200	8 S:2	0	0	0	0	0	2	2	0	2	0	0
Bombus crotchii Crotch bumble bee	G2 S1S2	None None		3,000 6,000	437 S:6	0	0	0	0	0	6	6	0	6	0	0
Botrychium ascendens upswept moonwort	G3 S2	None None	Rare Plant Rank - 2B.3 USFS_S-Sensitive	7,000 7,000	53 S:1	0	0	0	0	0	1	1	0	1	0	0
Botrychium crenulatum scalloped moonwort	G4 S3	None None	Rare Plant Rank - 2B.2 USFS_S-Sensitive	7,000 7,000	155 S:1	0	0	0	0	0	1	1	0	1	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	880 2,700	2548 S:2	0	0	0	0	2	0	2	0	0	2	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Calochortus palmeri var. palmeri Palmer's mariposa-lily	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden USFS_S-Sensitive	3,200 3,800	111 S:4	0	0	0	0	0	4	2	2	4	0	0
Calochortus plummerae Plummer's mariposa-lily	G4 S4	None None	Rare Plant Rank - 4.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,780 5,900	230 S:17	0	3	3	1	0	10	6	11	17	0	0
Canbya candida white pygmy-poppy	G3G4 S3S4	None None	Rare Plant Rank - 4.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,700 3,900	30 S:6	0	0	0	0	0	6	6	0	6	0	0
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	G2? S2?	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,750 3,750	46 S:2	0	0	1	0	0	1	2	0	2	0	0
Chaetodipus fallax pallidus pallid San Diego pocket mouse	G5T3T4 S3S4	None None	CDFW_SSC-Species of Special Concern	2,700 2,700	79 S:2	0	0	0	0	0	2	2	0	2	0	0
Charina umbratica southern rubber boa	G2G3 S2S3	None Threatened	USFS_S-Sensitive	5,000 5,000	74 S:1	0	0	0	0	0	1	1	0	1	0	0
Chorizanthe xanti var. leucotheca white-bracted spineflower	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_USDA-US Dept of Agriculture USFS_S-Sensitive	2,435 5,500	59 S:5	2	0	0	0	0	3	2	3	5	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Claytonia peirsonii ssp. peirsonii Peirson's spring beauty	G2G3T2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	8,000 8,380	9 S:3	0	3	0	0	0	0	1	2	3	0	0
Coccyzus americanus occidentalis western yellow-billed cuckoo	G5T2T3 S1	Threatened Endangered	BLM_S-Sensitive NABCI_RWL-Red Watch List USFS_S-Sensitive	2,800 2,800	165 S:1	0	0	0	0	1	0	1	0	0	1	0
Corynorhinus townsendii Townsend's big-eared bat	G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	2,630 2,630	635 S:1	0	0	0	0	0	1	1	0	1	0	0
Deinandra mohavensis Mojave tarplant	G2 S3	None Endangered	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	3,100 3,189	84 S:2	0	0	0	0	0	2	0	2	2	0	0
Diadophis punctatus modestus San Bernardino ringneck snake	G5T2T3 S2?	None None	USFS_S-Sensitive	3,498 3,647	14 S:2	2	0	0	0	0	0	0	2	2	0	0
Diplacus mohavensis Mojave monkeyflower	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,800 3,500	61 S:2	0	1	0	0	0	1	2	0	2	0	0
Empidonax traillii extimus southwestern willow flycatcher	G5T2 S1	Endangered Endangered	NABCI_RWL-Red Watch List	2,680 2,770	70 S:4	3	1	0	0	0	0	1	3	4	0	0
Emys marmorata western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	780 3,135	1404 S:4	1	3	0	0	0	0	1	3	4	0	0
Eremothera boothii ssp. boothii Booth's evening-primrose	G5T4 S3	None None	Rare Plant Rank - 2B.3	2,600 2,880	35 S:6	0	0	1	1	0	4	4	2	6	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Euchloe hyantis andrewsi Andrew's marble butterfly	G4G5T1 S1	None None		4,800 5,000	6 S:2	0	0	0	0	0	2	2	0	2	0	0
Eumops perotis californicus western mastiff bat	G4G5T4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern WBWG_H-High Priority		296 S:1	0	0	0	0	0	1	1	0	1	0	0
Euphydryas editha quino quino checkerspot butterfly	G5T1T2 S1S2	Endangered None		5,000 5,000	186 S:1	0	0	0	0	1	0	1	0	0	0	1
Glaucomys oregonensis californicus San Bernardino flying squirrel	G5T1T2 S1S2	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	4,600 4,600	12 S:2	0	1	0	0	0	1	1	1	2	0	0
Gopherus agassizii desert tortoise	G3 S2S3	Threatened Threatened	IUCN_VU-Vulnerable	2,690 3,700	985 S:10	0	6	4	0	0	0	2	8	10	0	0
Haliaeetus leucocephalus bald eagle	G5 S3	Delisted Endangered	BLM_S-Sensitive CDF_S-Sensitive CDFW_FP-Fully Protected IUCN_LC-Least Concern USFS_S-Sensitive	3,120 5,150	332 S:3	0	1	0	0	0	2	3	0	3	0	0
Helianthus nuttallii ssp. parishii Los Angeles sunflower	G5TX SX	None None	Rare Plant Rank - 1A	5,000 5,000	7 S:1	0	0	0	0	0	1	1	0	1	0	0
Helminthoglypta mohaveana Victorville shoulderband	G1 S1	None None	IUCN_NT-Near Threatened	2,640 2,800	2 S:2	0	0	0	0	0	2	2	0	2	0	0
Helminthoglypta taylori westfork shoulderband	G1 S1	None None		3,034 3,377	6 S:6	0	0	0	0	1	5	2	4	5	0	1
Heuchera parishii Parish's alumroot	G3 S3	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	5,100 5,100	70 S:1	0	1	0	0	0	0	0	1	1	0	0
Icaricia saepiolus aureolus San Gabriel Mountains blue butterfly	G5T1 S1	None None	USFS_S-Sensitive	6,000 6,000	2 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Icteria virens yellow-breasted chat	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,740 2,740	101 S:1	0	1	0	0	0	0	1	0	1	0	0
Juniperella mirabilis juniper metallic wood-boring beetle	G1 S1	None None		4,300 4,300	2 S:1	0	0	0	0	0	1	0	1	1	0	0
Lanius ludovicianus loggerhead shrike	G4 S4	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,719 3,424	110 S:4	0	1	3	0	0	0	0	4	4	0	0
Lasiurus cinereus hoary bat	G3G4 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		238 S:1	0	0	0	0	0	1	1	0	1	0	0
Lilium parryi lemon lily	G3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	6,100 7,150	160 S:4	0	1	0	0	0	3	3	1	4	0	0
Linanthus concinnus San Gabriel linanthus	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	5,700 8,400	43 S:6	0	1	0	0	0	5	2	4	6	0	0
Loeflingia squarrosa var. artemisiarum sagebrush loeflingia	G5T3 S2	None None	Rare Plant Rank - 2B.2 BLM_S-Sensitive	3,300 3,300	26 S:1	0	0	1	0	0	0	0	1	1	0	0
Lycium parishii Parish's desert-thorn	G4 S1	None None	Rare Plant Rank - 2B.3		21 S:1	0	0	0	0	1	0	1	0	0	0	1
Microtus californicus mohavensis Mohave river vole	G5T1 S1	None None	CDFW_SSC-Species of Special Concern	2,600 2,700	6 S:3	0	0	0	0	0	3	2	1	3	0	0
Monardella australis ssp. jokerstii Jokerst's monardella	G4T1? S1?	None None	Rare Plant Rank - 1B.1 USFS_S-Sensitive	4,450 4,450	3 S:1	0	0	0	0	0	1	1	0	1	0	0
Muhlenbergia californica California muhly	G4 S4	None None	Rare Plant Rank - 4.3	7,000 7,000	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Neotamias speciosus speciosus lodgepole chipmunk	G4T3T4 S2S3	None None		4,920 4,920	24 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report

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						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Opuntia basilaris var. brachyclada short-joint beavertail	G5T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,500 6,300	199 S:72	3	10	10	1	0	48	18	54	72	0	0
Oreonana vestita woolly mountain-parsley	G3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	6,400 8,960	55 S:5	1	1	0	0	0	3	4	1	5	0	0
Orobanche valida ssp. valida Rock Creek broomrape	G4T2 S2	None None	Rare Plant Rank - 1B.2 USFS_S-Sensitive	5,700 6,300	12 S:2	0	1	0	0	0	1	1	1	2	0	0
Ovis canadensis nelsoni desert bighorn sheep	G4T4 S3	None None	BLM_S-Sensitive CDFW_FP-Fully Protected USFS_S-Sensitive		46 S:1	0	0	0	0	0	1	1	0	1	0	0
Palaeoxenus dohrni Dohrn's elegant eucnemid beetle	G3? S3?	None None		4,000 4,000	3 S:1	0	0	0	0	0	1	0	1	1	0	0
Pandion haliaetus osprey	G5 S4	None None	CDF_S-Sensitive CDFW_WL-Watch List IUCN_LC-Least Concern	3,396 3,396	504 S:1	0	0	0	0	0	1	0	1	1	0	0
Pediomelum castoreum Beaver Dam breadroot	G3 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	2,657 3,310	26 S:3	0	0	0	1	0	2	2	1	3	0	0
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,600 5,290	784 S:19	0	2	1	0	1	15	17	2	18	0	1
Piranga rubra summer tanager	G5 S1	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	2,670 2,780	21 S:2	0	1	0	0	0	1	2	0	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Plebulina emigdionis San Emigdio blue butterfly	G1G2 S1S2	None None	USFS_S-Sensitive	2,450 2,702	11 S:4	0	0	2	0	0	2	2	2	4	0	0
Rana draytonii California red-legged frog	G2G3 S2S3	Threatened None	CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable	2,750 3,120	1671 S:2	0	0	0	0	0	2	2	0	2	0	0
Rana muscosa southern mountain yellow-legged frog	G1 S1	Endangered Endangered	CDFW_WL-Watch List IUCN_EN-Endangered USFS_S-Sensitive	3,200 3,500	186 S:2	0	0	0	0	2	0	2	0	0	1	1
Rhinichthys osculus ssp. 8 Santa Ana speckled dace	G5T1 S1	None None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern USFS_S-Sensitive	2,500 2,500	13 S:1	0	0	1	0	0	0	1	0	1	0	0
Schoenus nigricans black bog-rush	G4 S2	None None	Rare Plant Rank - 2B.2 IUCN_LC-Least Concern USFS_S-Sensitive	3,000 5,000	13 S:5	0	0	0	0	0	5	3	2	5	0	0
Scutellaria bolanderi ssp. austromontana southern mountains skullcap	G4T3 S3	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	2,700 3,140	43 S:2	0	0	0	0	0	2	1	1	2	0	0
Setophaga petechia yellow warbler	G5 S3S4	None None	CDFW_SSC-Species of Special Concern	2,700 3,660	78 S:2	0	1	0	0	0	1	1	1	2	0	0
Siphateles bicolor mohavensis Mohave tui chub	G4T1 S1	Endangered Endangered	AFS_EN-Endangered CDFW_FP-Fully Protected	2,660 3,400	24 S:7	0	0	0	0	6	1	6	1	1	2	4
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	G4 S4	None None		3,300 3,300	230 S:1	0	0	0	0	0	1	1	0	1	0	0
Symphyotrichum defoliatum San Bernardino aster	G2 S2	None None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_CRES-San Diego Zoo CRES Native Gene Seed Bank USFS_S-Sensitive	2,730 3,400	102 S:2	0	0	0	0	0	2	2	0	2	0	0

Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Symphyotrichum greatae Greata's aster	G2 S2	None None	Rare Plant Rank - 1B.3 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	3,440 3,440	56 S:1	0	0	0	0	0	1	1	0	1	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	3,301 3,301	594 S:1	0	0	0	0	0	1	1	0	1	0	0
Thamnophis hammondii two-striped gartersnake	G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive	2,956 3,498	184 S:4	1	2	0	0	0	1	1	3	4	0	0
Toxostoma lecontei Le Conte's thrasher	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	2,698 4,100	238 S:8	0	0	1	0	0	7	7	1	8	0	0
Vireo bellii pusillus least Bell's vireo	G5T2 S2	Endangered Endangered	IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List	2,590 2,760	504 S:7	0	5	1	0	0	1	1	6	7	0	0
Vireo vicinior gray vireo	G5 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern NABCI_YWL-Yellow Watch List USFS_S-Sensitive	3,200 3,260	28 S:2	0	0	0	0	0	2	2	0	2	0	0
Xerospermophilus mohavensis Mohave ground squirrel	G2G3 S2S3	None Threatened	BLM_S-Sensitive IUCN_VU-Vulnerable	2,520 3,460	432 S:12	0	2	1	0	2	7	8	4	10	1	1

California Rare Plant Rank

The California Rare Plant Rank status applies to plants only. The California Rare Plant Ranks are a ranking system originally developed by the California Native Plant Society (CNPS) to better define and categorize rarity in California's flora. These ranks were previously known as the CNPS lists but were renamed to the California Rare Plant Ranks to better reflect the joint effort among the CNPS, the CNDDB, and a wide range of botanical experts, who work together to assign a rarity ranking. All plants tracked by the CNDDB are assigned to a California Rare Plant Rank category. These categories are:

CA Rare Plant Rank	Description
1A	Plants presumed extinct in California and rare/extinct elsewhere
1B.1	Plants rare, threatened, or endangered in California and elsewhere; seriously threatened in California
1B.2	Plants rare, threatened, or endangered in California and elsewhere; fairly threatened in California
1B.3	Plants rare, threatened, or endangered in California and elsewhere; not very threatened in California
2A	Plants presumed extirpated in California, but more common elsewhere
2B.1	Plants rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California
2B.2	Plants rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California
2B.3	Plants rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
3.1	Plants about which we need more information; seriously threatened in California
3.2	Plants about which we need more information; fairly threatened in California
3.3	Plants about which we need more information; not very threatened in California
4.1	Plants of limited distribution; seriously threatened in California
4.2	Plants of limited distribution; fairly threatened in California
4.3	Plants of limited distribution; not very threatened in California

California Department of Fish and Wildlife Status

The California Department of Fish and Wildlife (CDFW) Status applies to animals only. The possible values for CDFW Status are:
T = Threatened E = Endangered

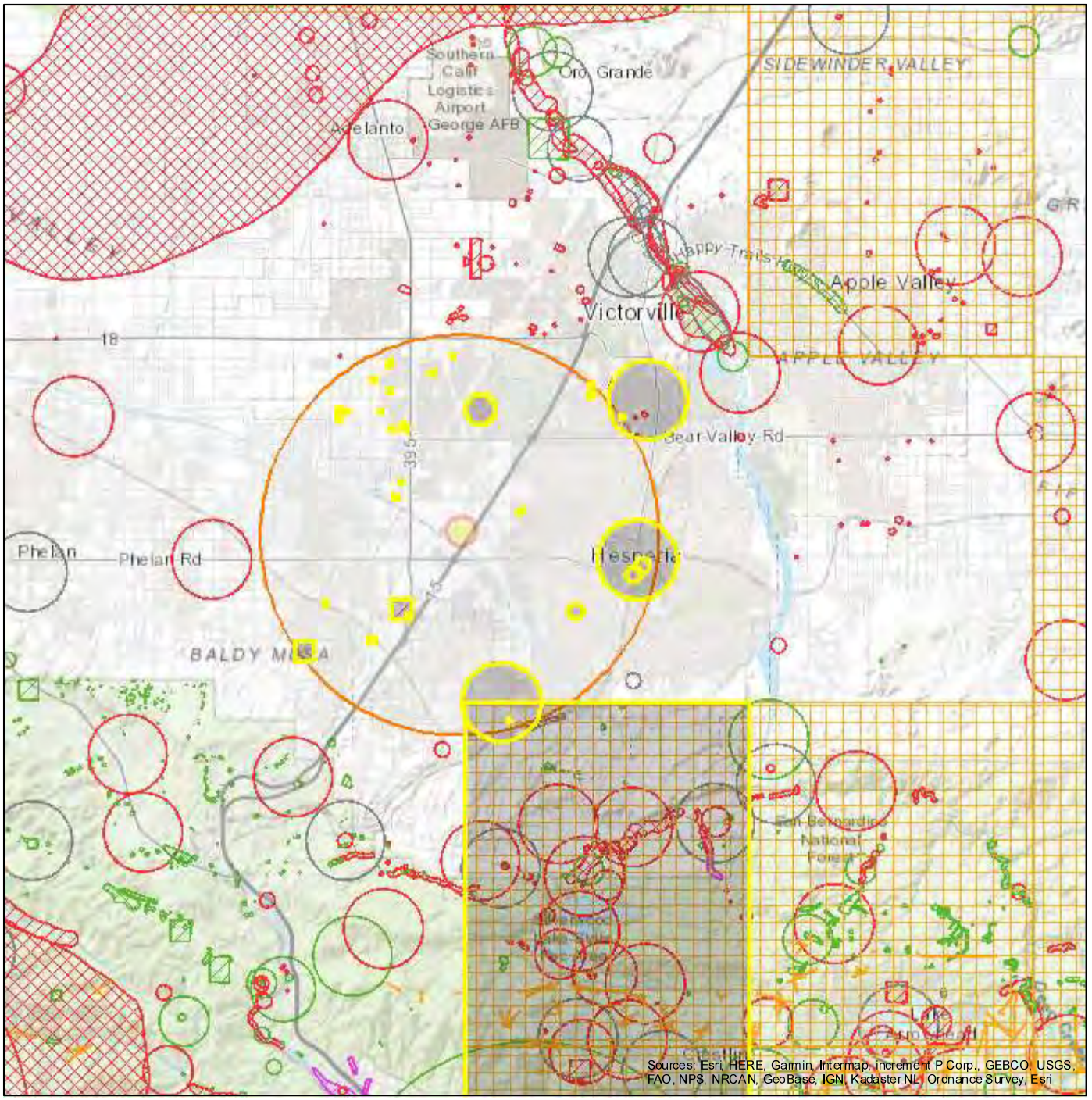
Status	Description
FP	Fully Protected: This classification was the State of California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.
SSC	Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.
WL	Watch List: The Department of Fish and Wildlife maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Map of Project Area 5-mile radius Palmetto Way

Spotted Owl Observations Spider Diagram [ds705]

California Natural Diversity Database (CNDDB) Commercial [ds85]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)



1:288,895

0 2.5 5 10 mi

0 4 8 16 km

N

March 28, 2022

Author: kboydstun@cascinc.com

Printed from http://bios.dfg.ca.gov

Appendix F

National Wetlands Inventory Map

U.S. Fish and Wildlife Service
National Wetlands Inventory

Palmetto Way Industrial Spec Project



September 5, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix G

Focused Survey Report

BURROWING OWL FOCUSED SURVEY REPORT

Amargosa Road & Palmetto Way Spec. Industrial Project

City of Hesperia, San Bernardino County, California

APN #s: 0405-072-[52-53, 55]



Prepared for:
RACHAMIM 5, LLC
6001 E. Slauson Avenue
Commerce, CA 90040

Contact: Mr. Ramin Namvar
213.769.4222 ext. 107
ramin@titaniumfabrics.com

CASC
Engineering and Consulting
www.cascinc.com

Prepared by:
CASC Engineering and Consulting, Inc.
27710 Jefferson Avenue, Suite 105
Temecula, CA 92590

Contact: Kimberly Boydstun
Senior Biologist/Project Manager
kboydstun@cascinc.com
951.216.9933

October 2022

Cover Photo Credit: Brandon Trentler

CASC
Engineering and Consulting

October 24, 2022

RACHAMIM 5, LLC
Attn: Mr. Ramin Namvir
6001 E. Slauson Avenue
Commerce, CA 90040
Office: 213.769.4222 ext. 107
ramin@titaniumfabrics.com

SUBJECT: BURROWING OWL FOCUSED SURVEY REPORT
AMARGOSA ROAD & PALMETTO WAY SPEC INDUSTRIAL PROJECT, HESPERIA, CA.

Dear Mr. Namvir,

At the request of Rachamim 5, LLC, CASC Engineering and Consultants (CASC) has prepared this Burrowing Owl Focused Survey Report for compliance with the State of California Natural Resource Agency, Department of Fish and Game, Staff Report on Burrowing Owl Mitigation (March 7, 2012) (Staff Report) guidelines to determine presence/absence of burrowing owl within San Bernardino County.

A habitat assessment for burrowing owl (BUOW) was conducted from April 27, 2022, and focused surveys were conducted June – August 2022. While suitable burrowing owl (*Athene cunicularia)* habitat was absent on the Project Site, no burrowing owl or their sign was observed during the focused surveys. This report documents the methods and results of the literature review and field surveys and provides a summary of the BUOW's natural history, existing site conditions within the Biological Study Area (BSA) and the determination of a no presence study results.

INTRODUCTION

BUOW habitat assessment and focused surveys were conducted in accordance with the Burrowing Owl Staff Report Guidelines approved for use of determination within the County of San Bernardino. CASC conducted a literature review and BUOW Habitat Assessment of the entire Project Site and within a 150-meter (500 feet) buffer area around the Project Site. The Project Site and the buffer area defined as the biological study area (BSA) in this report. The habitat assessment determined the presence of suitable habitat potentially supporting BUOWs. CASC then conducted a focused assessment to potentially locate suitable burrows and burrowing owls. The purpose of the surveys was to determine BUOW presence or absence within the BSA. If present, the surveys would also help to determine BUOW distribution and abundance within the BSA, and breeding status.

PROJECT LOCATION

The Project Site is located on Palmetto Way, in Hesperia, San Bernardino County, California (Figure 1, Regional Vicinity). The property consists of three parcels, Accessor's Parcel Number: 0405-075- [52, 53,55] US Geological Society (USGS) 7.5-minute *Baldy Mesa* Quadrangle (Figure 2, USGS Map), Township 4 north, range 5 west, (latitude 117.3777327°W, longitude 34.4366696°N).

PROJECT DESCRIPTION

Rachamim 5, LLC (Project Proponent) proposes to construction of a 498,500 square foot Industrial Warehouse Building (Project) with up to 25,000 square feet of office space. The proposed Project will include 76 loading dock doors, 182 truck/trailer parking spaces and 281 auto parking spaces on three (3) parcels (APNs: 0405-072-52, 53, and 55) consisting of approximately 30.52 undeveloped acres within the City of Hesperia in the Regional Commercial Zone. The parcels are bounded on the north and west by Avenal Street, south by Palmetto Way, and Amargosa Road to the east. Three (3) entrances to the site are provided, one (1) on the east side from Palmetto Way, one (1) from Palmetto Way on the south side of the site, and a proposed third entrance/exit onto Palmetto Way from the truck/trailer parking area at the southwest corner of the site. The facility will be built on spec and will be designed to accommodate 500 to 600 employees; there is no tenant currently attached to the project.

BURROWING OWL NATURAL HISTORY

The BUOW is a small, crepuscular (active at dusk and dawn), ground-inhabiting owl that is found largely throughout the southern United States. Its overall length is about seven to ten inches. Coloring is sandy brown on its head, back and upper wings, with noticeable white spotting on its back and upper wings. Adults are barred on their breast, while juveniles are buffy with a white collar. The brown and white mottling helps to provide camouflage in their preferred dry habitats. BUOWs have yellow eyes, long legs, a short tail, with relatively long, narrow wings and a flat, round head. Their long legs help them to see over grasses and short vegetation and aid them in catching their prey (Sibley 2000).

Typical BUOW habitat is open, dry, flat ground or low rolling hills with sparse vegetation and available burrows (Gallagher, 1997). BUOWs spend most of their time on the ground or on low perch sites such as fence posts and dirt mounds. They are generally found in open country, where tree or shrub canopies cover less than 30% of the habitat (CBOC 1997). Typical habitats include annual and perennial grasslands, shortgrass prairies open agricultural areas (particularly rangelands), desert floors, and vacant lots in residential areas and ruderal fields. Other habitats include oak savannah; grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitat; sandy beaches and coastal dunes; and river bottom lands. The BUOW is primarily a dry grassland species, but it persists and can even thrive in some landscapes that are highly altered by human activity. They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows (Shuford et al. 2008). They are the only small owl likely to be seen perched in the open daylight (Sibley 2000).

Nest and roost burrows of the BUOW in California are most commonly excavated by California ground squirrels (*Spermophilus beecheyi*), but they may use American badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox dens or holes (CDFW 2012). Where burrows are scarce, man-made structures, such as culverts, piles of concrete, rubble, or debris, pipes, asphalt, artificial nest boxes, and openings beneath cement or asphalt pavement also are used as nest sites (CDFW 2012). Both natural and artificial burrows provide protection, shelter, and nest sites.

Nest burrows are usually three to nine feet long, with a downward slope, a “J” or “U” shaped bend, and an enlarged nest chamber at the end. Usually, the immediate area about the burrow is barren and devoid of vegetation. Adults usually return to the same burrow or a nearby area each year. Adult males often use one or more “satellite” burrows near the nest burrow during the nesting period (CBOC 1997). Both sexes prepare the burrow for nesting using their feet, beaks, and wings to scrape out dirt.

BUOWs often nest in loose colonies and members can alert each other to the approach of predators and join in harassment of them. During the nesting season, adult males forage over home ranges 0.8 to 1.16 square miles (2 to 3 square kilometers) and the ranges of neighboring males may overlap considerably (Shuford et al. 2008). A small territory around the nest burrow is aggressively defended against intrusions by other BUOWs, squirrels, and predators. Nesting season for the BUOW in California (courtship and egg laying) occurs between February 1 and August 30 (CDFW 2012). Actual breeding occurs anywhere from March through August, with the peak activity in April and May. The peak of the breeding season occurs between April 15 and July 15 and is the period when most BUOWs have active nests (eggs or young) (CDFW 2012).

Suitable BUOW habitat must also support the primary prey items for BUOWs, such as insects and small mammals. BUOWs are opportunistic predators preying primarily on a broad array of arthropods (centipedes, spiders, beetles, crickets, and grasshoppers), and small rodents, but they also eat birds, amphibians, reptiles, and carrion. They may hunt from a perch, hover, hawk, run, walk, dive or hop after prey.

BURROWING OWL STATUS AND PROTECTION

Federal and State Protection

While BUOW has no federal protection status, BUOW is designated by California Department of Fish and Wildlife (CDFW) as a Species of Special Concern. This status is given a species, subspecies, or distinct population of an animal (fish, amphibian, reptile, bird and mammal) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria: is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role; is listed as federally, but not state-, threatened or endangered; meets the state definition of threatened or endangered, but has not formally been listed; is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status; or has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status. The goal of designating species as species of special concern is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.

Burrowing owls are also protected from direct “take” (defined in this case as killing, injuring, or causing failure of an active nesting effort) by both the federal Migratory Bird Treaty Act and the California Fish and Game Code (Sections § 3503, § 3503.5, and § 3513) and Migratory Bird Treaty Act (MBTA) of 1918 (Title 16, United States Code sections 703-712).

Local Protection

Burrowing owl are considered locally significant as their populations have declined in recent years. The City of Hesperia follows the CDFG 2012 Staff Report guidelines and recommends surveys be performed on Project Sites where suitable habitat is present.

STUDY METHODS

Survey protocol followed the *Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency, Department of Fish and Game March 7, 2012, Appendix C Habitat Assessment and Report Details, Appendix D Breeding and Non-breeding Season Surveys and Reports*.

Literature Review

To identify the biological resources that exist within the BSA and project vicinity, biologists reviewed relevant literature, databases, agency web sites, reports, management plans, Geographic Information System (GIS) data, maps, and aerial imagery. This desktop analysis was conducted prior to the field surveys and is described below.

The California Natural Diversity Database (CNDDB) was accessed on March 28, 2022 and was used to determine if and to what extent BUOWs occur on and adjacent to the Project Site. Records corresponding to the USGS 7.5-Minute Topographic Map Quadrangle were obtained.

Field Survey Methodology

The entire 30.52-acre site was surveyed along with a 500-foot buffer to the west and a portion of the buffer to the northeast of the Project Site (Figure 3, Survey Area and Transects). The buffer areas to the north of the project are several fenced residential lots, east is east is Interstate 15, and to the south is an industrial building, and west is open space. Surveys were conducted during the daytime on foot from April 27, 2022 through August 10, 2022. Surveys were not conducted during abnormal or excessive cold, heat, wind, rain, or other inclement weather. The biologists gained direct access to all areas within the project area for 100-percent visual coverage. Biologists used Global Positioning System (GPS) units and other GIS and survey-related techniques (Collector App), to collect locational data and record relevant attributes of features or species encountered. Digital color photographs were taken during the field surveys to record site conditions at the time of the field surveys. Representative Site Photos are show in Figures 4a-4d. Potential burrows and their location within the BSA were recorded using Collector and are shown in Figure 5, Potential Burrow Locations and Photo Point Locations.

BUOW HABITAT ASSESSMENT AND FOCUSED SURVEYS

Step I: Habitat Assessment.

Biologists characterized the existing land cover and searched for the presence of suitable BUOW habitat within the Project Site and within a 500-foot buffer to the Project Site where accessible (Figure 3). Buffers to west included undeveloped land, to the north residential properties, to the south an industrial building, and to the east Amargosa Road and Interstate 15. Only the buffer to the west and a small portion to the northeast of the Project Site was surveyed as the other areas were inaccessible (fenced residential properties) or developed. One hundred percent visual coverage was obtained within the entire Project Site (30.52-acres) and the buffers.

The BSA is in a region of San Bernardino County known as the “High Desert” due to its approximate elevation of 3,600 feet above mean sea level (amsl). Much of the Survey Area is relatively flat, with surface elevations varying between approximately 3,468 feet amsl in the southwestern corner to approximately 3,443 feet amsl in the northeastern corner. Identification of habitats and plant communities within the BSA were based on observed dominant species. Generally, classifications of habitat types or vegetation communities were based on Holland’s *Preliminary Descriptions of the Terrestrial Communities of California* (Holland 1986) and *A Manual of California Vegetation Second Edition* (Sawyer et al. 2009) with modifications to better represent existing site conditions.

Step II: Locating Burrows and Burrowing Owls.

Surveys were conducted from sunrise to 10:00 a.m. when weather conditions were conducive to BUOWs. Suitable BUOW habitat areas were identified during the initial habitat assessment (Step I, BUOW Habitat Assessment). Step II surveys were conducted within accessible portions of the BSA that contained BUOW

essential habitat (nesting, foraging, wintering, and dispersal habitat). Where topography and access was suitable, the biologists walked parallel straight-line belt transects spaced no more than 30 meters apart to allow 100% visual coverage of the survey area. In inaccessible areas, biologists used binoculars to gain visual coverage of any inaccessible features. Each transect was walked at a pace that allowed careful observations along the transect route and the vicinity (Figure 3).

Biologists searched for suitable BUOW burrows and examined the entrances of all potential burrows for BUOW sign (i.e. tracks, molted feathers, cast pellets,1 prey remains, eggshell fragments, BUOW whitewash, nest burrow decoration materials [e.g., paper, foil, or plastic items (CDFW 2012). Biologists also searched rock piles and man-made culverts and pipes for BUOW sign. Biologists identified, recorded, and mapped with Collector App all potential burrows, occupied burrows, and sign of BUOW (Figure 3).

SURVEY RESULTS

Vegetation on the Project Site was classified as *Larrea tridentata-Ambrosia dumosa Shrubland Alliance*. Plant species nomenclature and taxonomy followed *The Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al. 2012). The Project Site is undeveloped and has been disturbed by grading which appears to have been from some time ago as the vegetation is growing back but is of small stature. Impacts will encompass the entire 30.52-acres of the Project Site. The vegetation community within the Survey Area was identified as Larrea tridentata-Ambrosia dumosa Shrubland Alliance with dominant species being white bursage (*Ambrosia dumosa*), creosote bush (*Larrea tridentata*) and Mexican tea (*Ephedra trifurca*). Joshua tree (*Yucca brevifolia*) (CDFW Candidate Listed species) is present on the Project Site. Potentially suitable burrows were recorded using Collector App within the BSA (Figure 3, Survey Area and Transects). A photo point location map is provided in Figure 4. And representative site photographs are included in Figures 5a-d. A habitat assessment was conducted on April 27, 2022 and focused surveys for BUOW were conducted beginning on June 2, 2022 through August 10, 2022. Table 1 shows the date, times and specific field conditions associated with each survey date.

Table 1. Survey Information

Survey Date (2018)	Survey Type	Survey Time	Temperature Range (°F)	Cloud Cover (%)	Wind Speed (mph)	Surveyor
04/27/2022	Habitat Assessment	0900-1630	58-83°F	clear	1-3mph	KB, CP
06/02/2022	Focused BUOW Survey #1	0615-1130	59-83°F	clear	0-2mph	KB
06/27/2022	Focused BUOW Survey #2	0630-1030	61-75°F	100% clearing to 0%	0-2mph	KB
07/20/2022	Focused BUOW Survey #3	0535-1015	66-83°F	clear	0-1mph	KB
08/10/2018	Focused BUOW Survey #4	0550-1055	68-91°F	0-10%	0-2mph	KB
KB - Kim Boydstun CP – Cory Peterson						

[1] Defined as one to two inches long brown to black regurgitated pellets consisting of non-digestible portions of the owls' diet, such as fur, bones, claws, beetle elytra, or feathers.

RECOMMENDATIONS AND FINDINGS

Burrowing owl was not observed nor was any sign detected at the Project Site or within the buffer area during the 2022 surveys. Since there is likely to be a substantial amount of time between the 2022 survey, ground-breaking activities and subsequent project development a preconstruction BuOw survey is recommended.

- *Conduct a 30-day preconstruction Burrowing Owl Survey be performed by a qualified biologist recognized by the County of San Bernardino. After the survey, a technical memorandum of findings shall be prepared and sent to the California Department of Fish and Wildlife (CDFW), Environmental Programs Department (EPD) at the County of Riverside, and the Regional Conservation Authority.*

- *If the Project Site is found positive for burrowing owl, coordination with CDFW will be mandatory and additional exclusionary and relocation efforts will be necessary.*

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological and natural resources report, and that the facts, statements, and information presented are true and correct to the best of my knowledge.

Kimberly Boydstun
Senior Biologist/Project Manager
CASC Engineering and Consulting, Inc.
October 24, 2022

FIGURES

Figure 1: Regional Vicinity Map
Figure 2: USGS Map
Figure 3: Survey Area and Transects
Figure 4: Photo Point Location Map and Potential Burrow Locations
Figure 5a-d: Representative Site Photos

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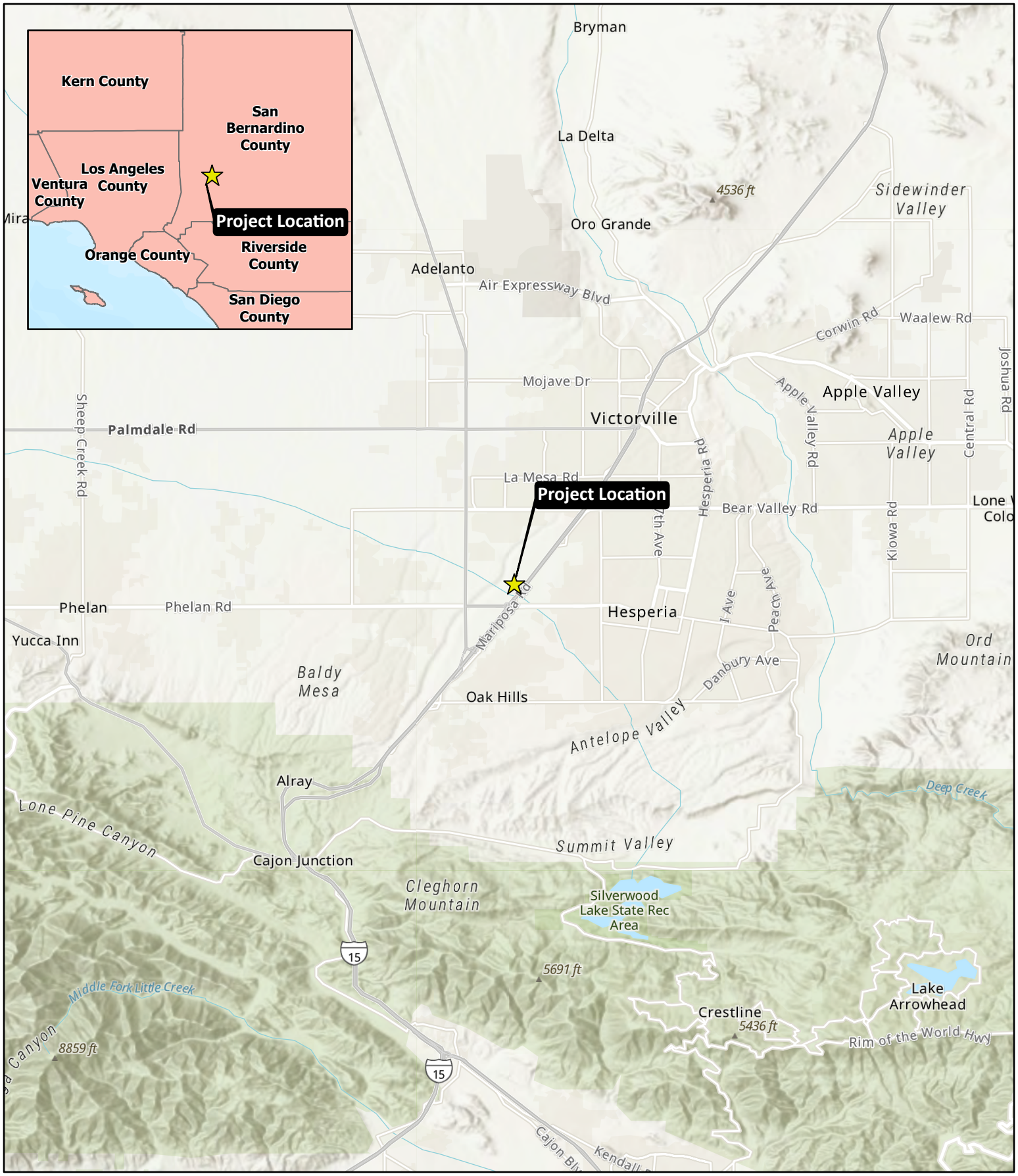
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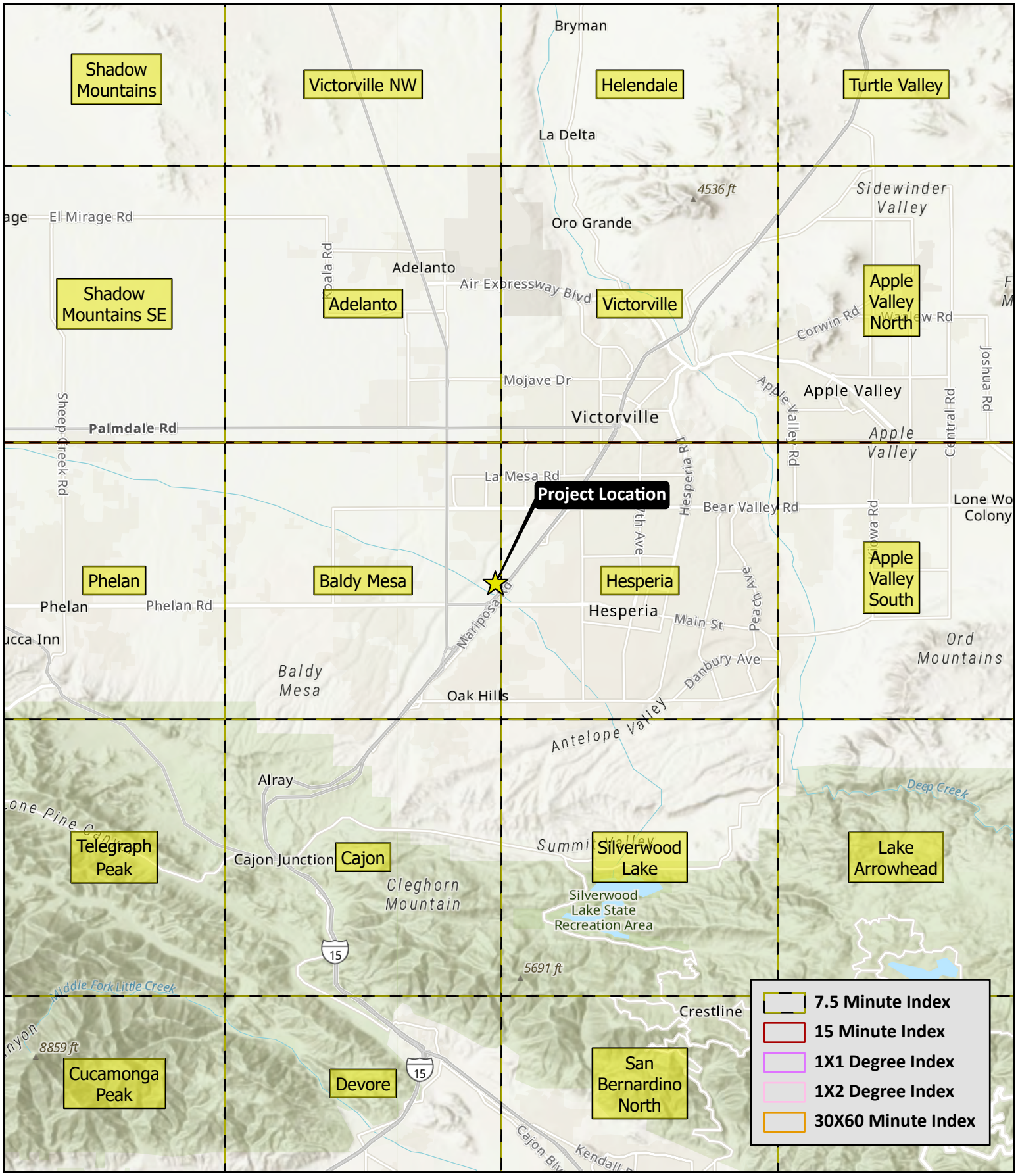
1" = 3.95 miles

Figure 1
Regional Vicinity

APN: 0405-072-[52,53,55]

City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, California State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Esri, NASA, NGA, USGS, Esri, USGS

AMARGOSA ROAD & PALMETTO WAY SPEC. INDUSTRIAL PROJECT, HESPERIA, CA.
BURROWING OWL FOCUSED SURVEY REPORT



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1" = 3.95 miles

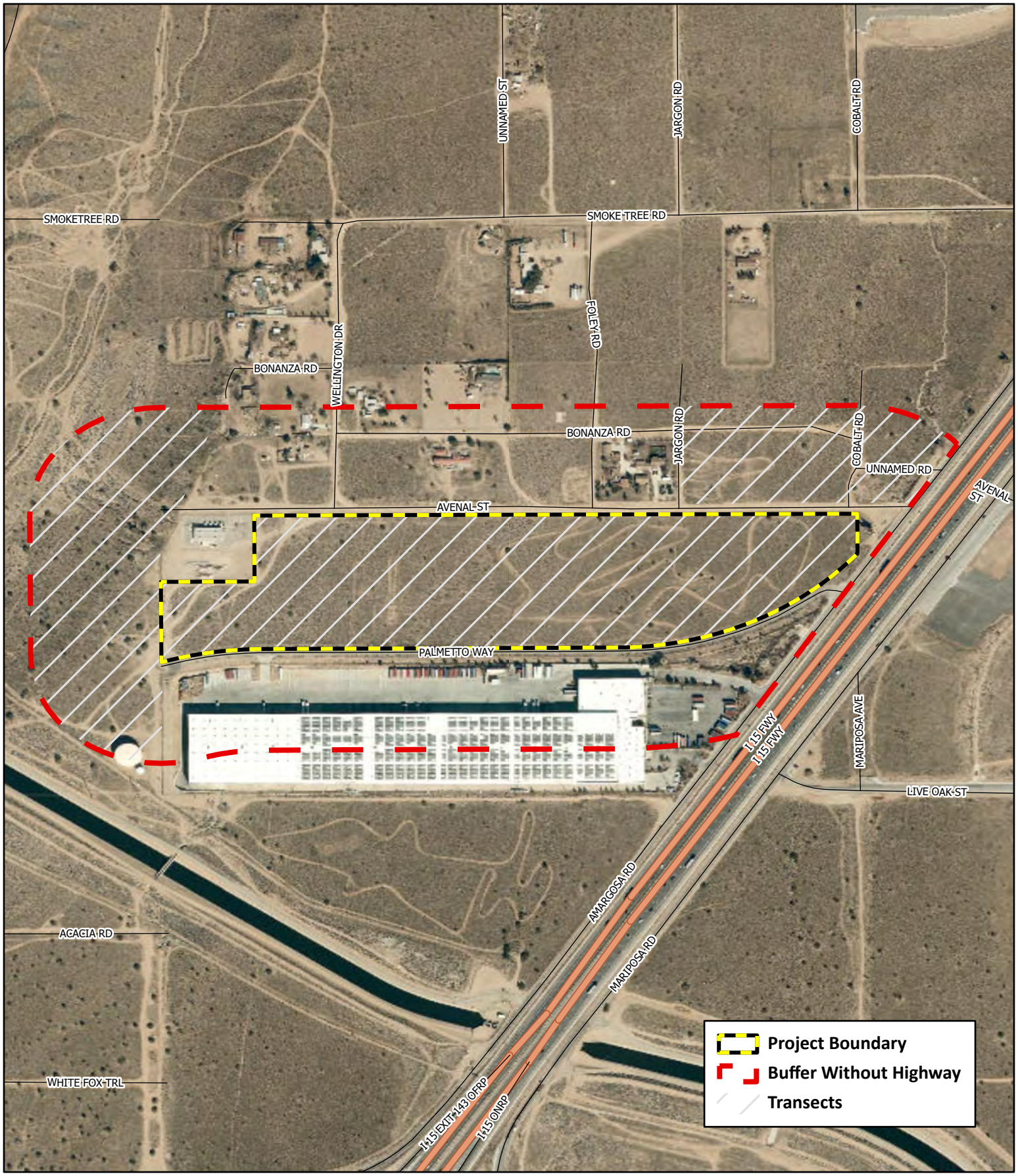
City of Hesperia, California State Parks, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, Esri, CGIAR, USGS

Figure 2

USGS

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec. Industrial Project
Hesperia, CA.



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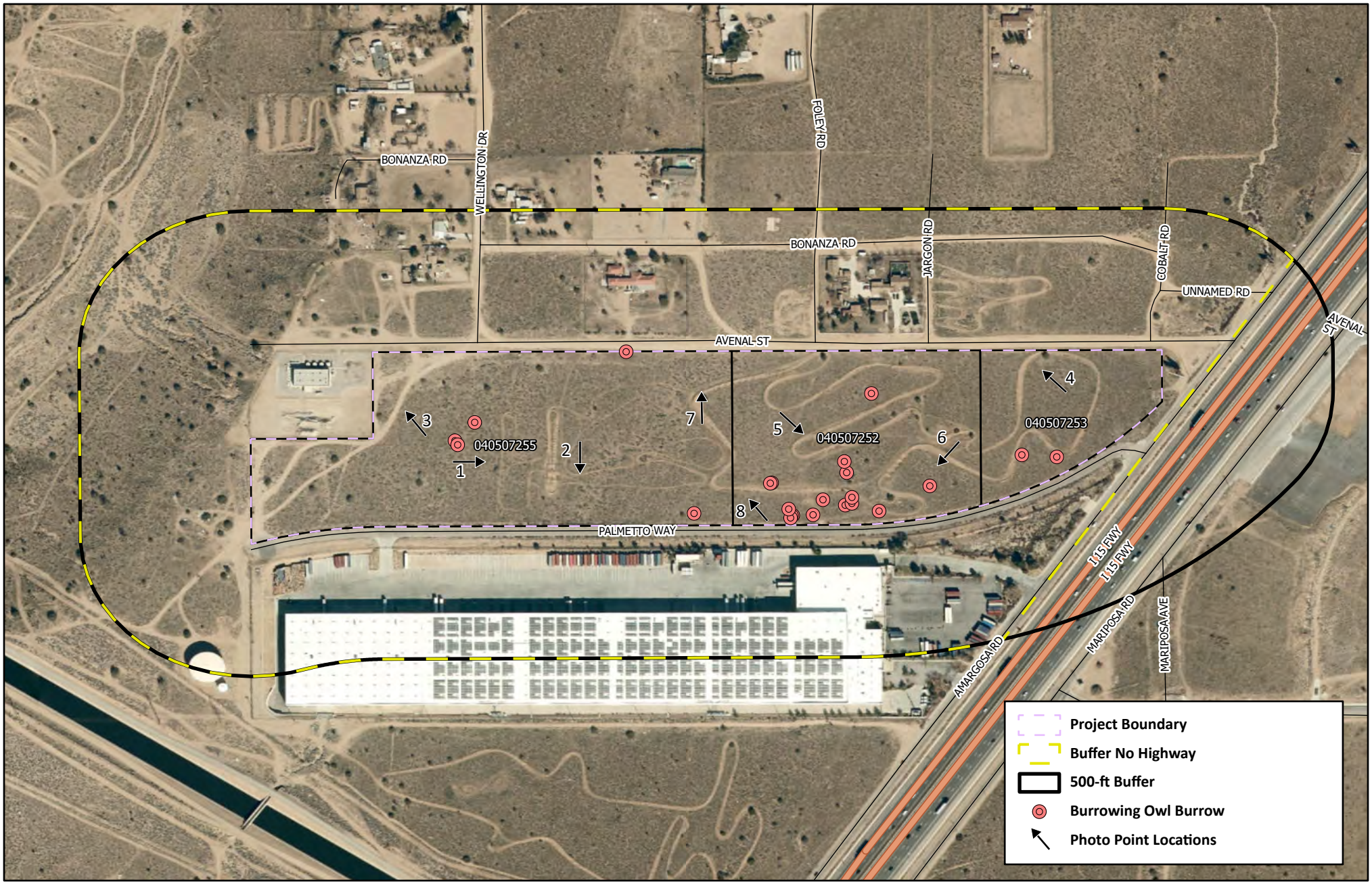
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1" = 585 Feet

San Bernardino County, Maxar

Figure 3
Survey Area and Transects

APN: 0405-072-[52,53,55]



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1" = 460 Feet

San Bernardino County, Maxar

Figure 3
Potential Burrow Locations and Photo Point Locations

APN: 0405-072-[52,53,55]

Amargosa Road & Palmetto Way Spec Industrial Project, Hesperia, CA



Photograph 1. Looking East across Project Site.



Photograph 2. Looking South at existing building which is off-site.



Photograph 3. Looking Northwest at adjacent off-site utilities.



Photograph 4. Looking Northwest.

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FIGURE 5b
SITE PHOTOGRAPHS
Amargosa Road & Palmetto Way Spec. Industrial Project, Hesperia, CA.



Photograph 5. Looking Southeast.



Photograph 6. Looking Southwest.

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FIGURE 5c
SITE PHOTOGRAPHS
Amargosa Road & Palmetto Way Spec. Industrial Project, Hesperia, CA.



Photograph 7. Looking North.



Photograph 8. Looking North at a potential BuOw burrow..

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FIGURE 5d
SITE PHOTOGRAPHS
Amargosa Road & Palmetto Way Spec. Industrial Project, Hesperia, CA.

Mohave Ground Squirrel -MGS (*Xerospermophilus mohavensis)*
Desert Tortoise -DT (*Gopherus agassizii*)
Vegetation and Rare Plant
Survey Results for
Amargosa Road and Palmetto Way Industrial Facility Project, Hesperia, Ca.



Site Acreage 30.52 Acres

APN 040507255/54/53/52

Prepared by:

ENVIRA
P. O. Box 2612
Ramona, CA 92065
Phone: 619-885-0236
E-mail: phvergne@aol.com

Trapping Surveys Conducted On:
April 5 to 9, 2022
May 23 to 27, 2022
June 14 to 18, 2022

Report Date:
August 21, 2022

Prepared For:

CASC
Engineering and Consulting

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Appendix A MOHAVE GROUND SQUIRREL TRAPPING SUMMARY FORM

Appendix B MOU

1.0 EXECUTIVE SUMMARY

The project site is within the historical range of the Mohave ground squirrel *Xerospermophilus mohavensis*)-MGS, a state-Threatened species; within the historical range of the federally listed Desert tortoise (*Gopherus agassizii*)-DT; and several listed plant species.

Philippe Vergne of ENVIRA was contracted by CASC Engineering to conduct focused surveys for the MGS, DT, and rare plant surveys for the Amargosa Road and Palmetto Way Industrial Facility.

The proposed project is for the construction of a warehouse facility and related improvements. The proposed project is located in Hesperia, California at the junction of Amargosa Road and Palmetto Way.

This report documents the findings of the focused surveys for the Project Site. The intended use of this document is to disclose the presence or absence of MGS, DT, and rare plants within the project limits. For the purposes of this document, the Project's study area is the area outlined in Figure 1.

The MGS was not captured on the current project site during the 2022 protocol survey as described in this report. The desert tortoise is not present within the proposed project footprint nor the zone of influence. No rare plants were documented on site. **The Project Site does not currently support MGS, desert tortoise, or rare plants.**

Implementation of the Project will not result in the loss of individual MGS, nor will it adversely affect local or regional MGS populations; it will not result in the take of DT or impacts to occupied habitat; no rare plants were documented on site and no take will occur.

2.0 PROJECT AND PROPERTY DESCRIPTION

The proposed project is for the construction of an industrial warehouse facility and related improvements. The proposed project is located in Hesperia, California to the North of Palmetto Way and to the West of Amargosa Road (Figure 1).

The project site is within the historical range of the Mohave ground squirrel (MGS, *Xerospermophilus mohavensis*), a state-Threatened species; within the historical range of the federally listed Desert tortoise (*Gopherus agassizii*); and within the range of several listed plant species. The proposed project site contains habitat considered suitable for the above mentioned species.

The project site is an undeveloped mostly flat area with a slight southwest slope.

Figure 1. Site Vicinity and Project Boundary



2.1 SITE VEGETATION

The disturbed annual grasslands which dominate the site vegetation and sparse scrub understory on site are dominated by fiddleneck, brome, and forbs. Joshua Trees are scattered throughout the site. The severely impacted scrub community shows remnants of Saltbush, California Juniper, and isolated creosote bush (Table1).



Photo 1 - Looking northwest across site.



Photo 2 - Looking northeast across site.

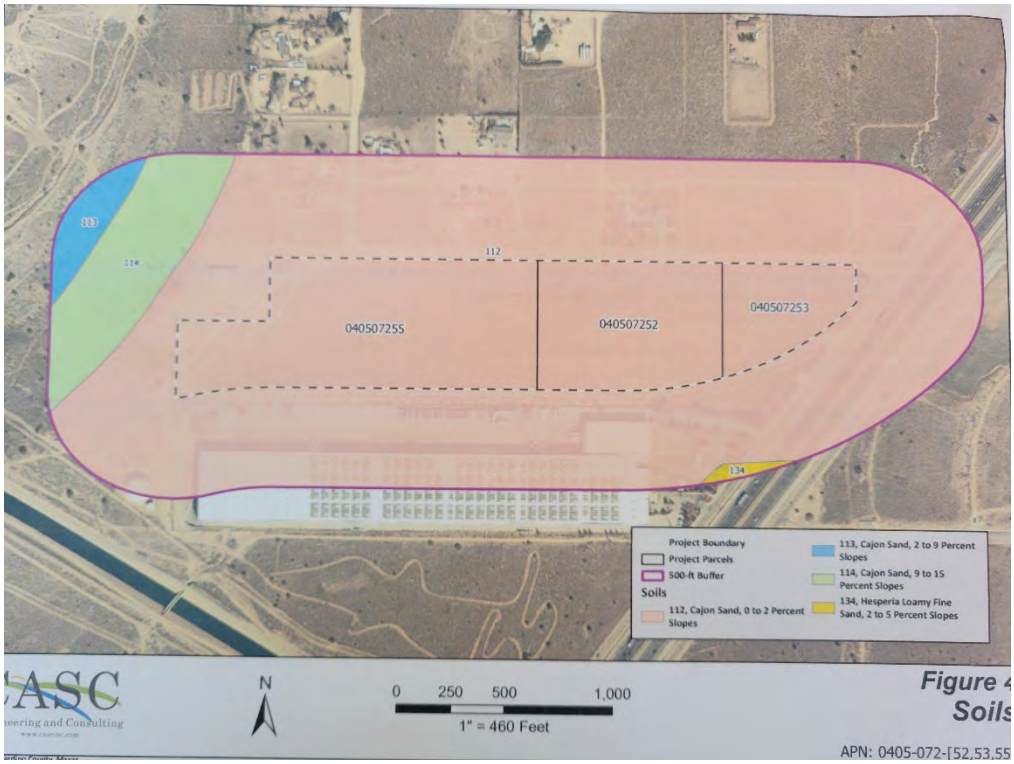
Table 1. Site Vegetation

Common Name	**Scientific Name**
California juniper	*Juniperus californica*
Burro bush or white bur sage	*Ambrosia dumosa*
Desert sunflower	*Geraea canescens*
Fremont pincushion	*Chaenactis fremontii*
Cheese bush	*Hymenoclea salsola*
Antelope bush	*Purshia tritendata*
Flat-topped buckwheat	*Eriogonum plumatella*
California buckwheat	*Eriogonum fasciculatum*
Great basin sagebrush	*Artemisia tritendata*
Coopers box-thorn	*Lycium cooperi*
Desert sage	*Salvia dorii*
Woody bottle washer	*Camissonia boothii*
Plantain	*Plantago insularis*
Cotton thorn	*Tetradymia axillaris*
Creosote bush	*Larrea tridentata*
Hop sage	*Grayia sinosa*
Snakeweed	*Gutierrezia microcephala*
Rabbit brush	*Chrysothamnus nauseosus*
Nevada ephedra	*Ephreda nevadensis*
Joshua tree	*Yucca brevifolia*
Red brome	*Bromus madritensis*
Cheat grass	*Bromus tectorum*
Perennial bluegrass	*Poa secunda*
Mediterranean grass	*Schismus barbatus*
Red stemmed filaree	*Erodium cicutarium*

2.2 SITE TOPOGRAPHY AND SOILS

The project site is an undeveloped portion north of Palmetto Way, to the West of Amargosa Road (adjacent to the 15 Freeway). The valley floor is almost flat. Elevation ranges from 3,443 to 3,468 feet. The soils on the site are Cajon sands, and Hesperia loamy fine sands (Figure 2).

Figure 2. Project Soils Map (Source: CASC Engineering)



The site occurs on the 7.5" *Baldy Mesa* quadrangle USGS Quadrangle Map (Township 4N, Range 5W) Surrounding land uses include the California Aqueduct to the east, Avenal Street to the north, Disturbed open space to the south, and Interstate Highway 15 to the west.

2.3 WILDLIFE

Observations of wildlife included scat, trails, tracks, burrows, skeletal remains, calls and visual sightings. Animal species observed are shown in Table 2.

Table 2. Animal Species Observed

Common name	Scientific Name
Reptiles	
Side-blotched lizard	*Uta stansburiana*
Basin whiptail	*Aspidoscelis tigris tigris*
Desert night lizard	*Xantusia vigilis*
Birds	
Cactus wren	*Campylorhynchus brunneicapillus*
Common raven	*Corvus corax*
Horned lark	*Eremophila alpestris*
Barn owl	*Tyto alba*
Loggerhead shrike	*Lanius ludovicianus*
Mammals	
Black-tailed jack rabbit	*Lepus californicus*
Coyote	*Canis latrans*
White-tailed Antelope squirrel	*Ammospermophilus leucurus*
Kangaroo rat	*Dipodomys sp.*

3.0 Regulatory Background, Mohave Ground Squirrel, Desert Tortoise and Rare Plants

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans and relevant documents were reviewed to determine the locations and types of biological resources that have the potential to exist within and adjacent to the study area; resources within several miles of the Project Site were evaluated.

The materials reviewed included, but were not limited to, the following:

1. U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2013a);
2. USFWS Ventura Field Office Species List for San Bernardino County (2013b);
3. California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW 2013);
4. California Native Plant Society (CNPS) Electronic Inventory (CNPS 2021);
5. Aerial Photographs (Microsoft Corporation 2013);
6. Previous biological reports prepared for immediately adjacent sites (Brylski 2012; Vergne 2017); and
7. Leitner Current Status of MGS.

Regulatory Framework

Federal Endangered Species Act

The USFWS administers the federal Endangered Species Act (FESA) that provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The FESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is a species that is likely to become endangered in the foreseeable future. A "proposed" species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the FESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

California Endangered Species Act

The CDFG administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

Sections 3503 and 3511 of California Fish and Game Code

The CDFG administers the California Fish and Game Code. There are particular sections of the Code that are applicable to natural resource management. For example, Section 3503 of the Code states it is

unlawful to take, possesses, or needlessly destroy the nest or eggs of any bird. Section 3511 of the Code lists fully-protected bird species, where the CDFG is unable to authorize the issuance of permits or licenses to take these species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union.

Section 404 of the Federal Clean Water Act

Section 404 of the federal Clean Water Act, which is administered by the Corps regulates the discharge of dredge and fill material into waters of the United States. The Corps has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. Normally, the Corps requires an individual permit for an activity that will affect an area equal to or in excess of 0.3 acre of waters of the United States. Projects that result in impacts to less than 0.3 acre of waters of the United States can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. The Corps also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.3 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

Section 1600 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife, and also has jurisdiction over dry washes that carry water ephemerally during storm events.

Section 401 of the Clean Water Act

Section 401 of the Clean Water Act requires that "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the Corps will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB).

Porter Cologne Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" (water code 13260(a)), pursuant to provisions of the State Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)).

Mohave Ground Squirrel

The MGS was listed as a rare species in 1971 under the authority of the California State Endangered Species Act of 1970 (CESA) and was re-designated as a state threatened species in 1985 (Gustafson 1993). The MGS is small, grayish, diurnal squirrel. The California Department of Fish and Wildlife (CDFW) is the responsible agency that provides for its protection and management.

MGS are dormant in the fall and winter months, but emerge from hibernation in February and begin pair bonding and mating during March (Gustafson 1993). If rainfall is adequate, MGS will reproduce. If rainfall levels are not sufficient to support substantial annual plant growth, then MGS will merely forage on herbaceous perennials and shrubs until they gain ample body mass for another prolonged period of dormancy (Gustafson 1993). The adult males can enter dormancy as early as late May. Juveniles will remain above-ground until August in order to acquire generous fat reserves prior to entering dormancy.

The site is within the historic range of the Mohave ground squirrel. MGS occur in the western half of the Mojave Desert (Lightner 2012) (Figure 3). Its historical range encompasses an area between Antelope Valley and Lucerne Valley, in the south (Gustafson 1993). However, MGS occurrences in the southern portion of its range are very unusual. The northern limits of the range are near Owens Dry Lake bed, in the north, and through China Lake Naval Weapons Station and Fort Irwin Military Base in the east (Gustafson 1993). The eastern limit of the species range extends to Barstow and south along the Mojave River. The western limits loosely follow State Highway 14 and the foothills of the southern Sierra Nevada escarpment (Gustafson 1993). Several other common squirrels occur within their range; antelope ground squirrel (AGS; *Ammospermophilus leucurus*), round-tailed ground squirrel (RTGS; *Xerospermophilus tereticaudus*) and the California ground squirrel (CGS; *Spermophilus beecheyi*).

Figure 3. MGS Distribution from Lightner 2012

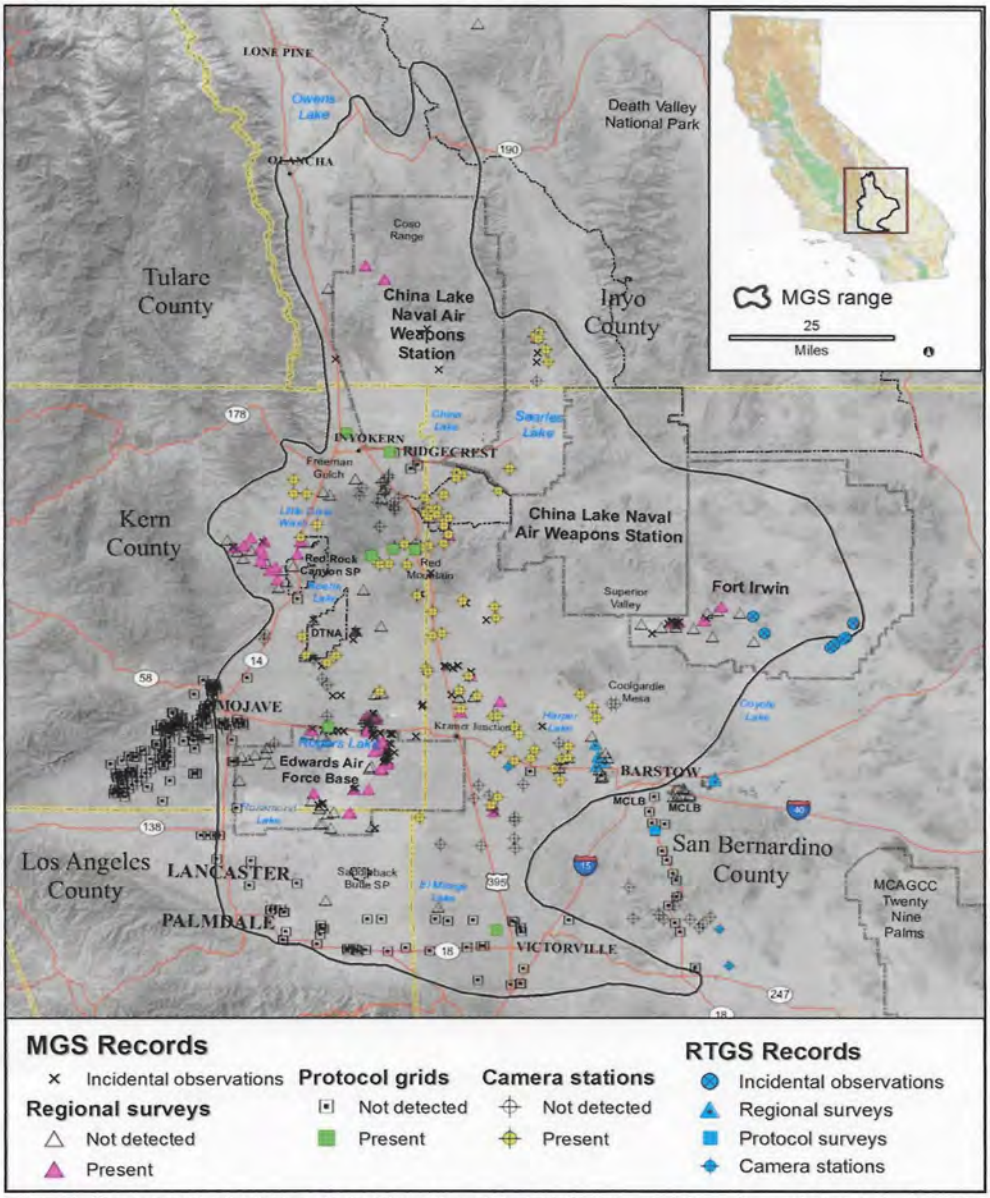


FIGURE 1. The geographic distribution of all Mohave Ground Squirrel (*Xerospermophilus mohavensis*) records for the period 2008–2012. Occurrences of the Round-tailed Ground Squirrel (*Xerospermophilus tereticaudus*) in the contact zone between the two species are also shown.

Desert Tortoise

The desert tortoise (*Gopherus agassizii*) is a desert dwelling reptile that occurs throughout the Mojave and Sonoran deserts. It is found in California, Nevada and Utah, occurring in almost every type of habitat except dry lakes or playas, sand dunes and sand sheets and rocky slopes.

Tortoises construct underground burrows as living quarters, and spend most of the year down in the burrows. They come out for forage in the early spring (February and March) and remain active above ground until early June, when they retreat to their burrows for most of the summer, fall and winter months. They will emerge and be active during the fall months of September and October, depending upon late summer weather conditions. Although they stay underground for most of the year, tortoises can be found active above ground at all times of the year.

Tortoises forage on spring annual wildflowers and grasses. During the foraging season, they also breed and lay eggs in preparation for the next spring.

The desert tortoise hibernates or estivates underground for much of the year as an adaptation to the extreme temperature changes characteristic of desert winters and summers. As a result, determining whether desert tortoise is present in a particular area is generally restricted to locating sign, or evidence, of recent activity.

The tortoise has been undergoing a decline in population due to a number of factors. These include loss or destruction of habitat, killing or harming of animals in the wild, collection of individual animals, raven predation and disease.

The CDFW listed the desert tortoise as threatened on June 22, 1989. The tortoise was emergency listed as endangered by the USFWS on August 4, 1989. The USFWS listing was later changed to threatened. Both listings were made based on populations declining due to the factors listed above. The discovery that the tortoise was rapidly disappearing throughout its range as a result of a disease known as Upper Respiratory Disease Syndrome (URDS) was a critical part of the listing decisions.

This species is known to occur throughout the project general region. Figure 4 depicts the USFW Service critical habitat for the desert tortoise. Figure 5 the desert tortoise distribution in the Mohave desert.

Figure 4. USFWS Desert Tortoise Critical Habitat

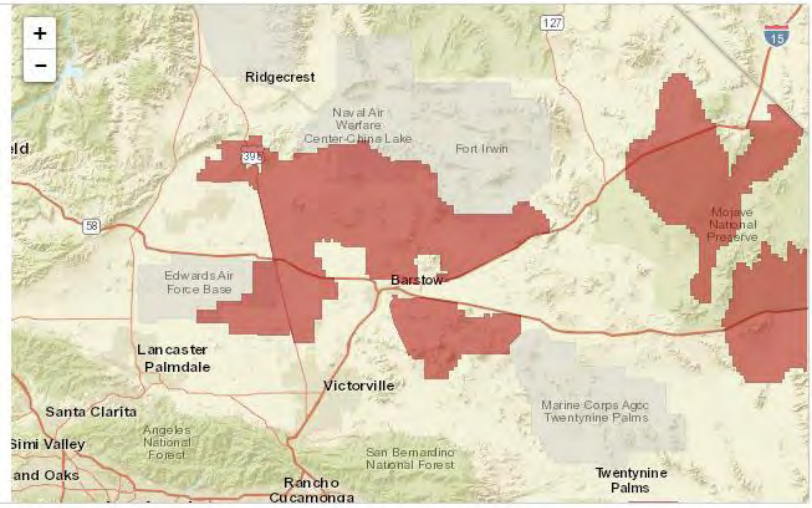


Figure 5. Desert Tortoise Distribution for Mohave Desert



Rare Plants

Several rare plants are listed as possibly occurring within the proposed project area (Table 3).

Table 3. Rare Plants in Project Vicinity

Parish's brittlescale *Atriplex parishii*	Annual. Alkali flats largely in valley or annual grassland. From cismontane California to the edge of the desert, extending into the Central Valley.
Ayenia *Ayenia compacta*	Perennial. Mojave Desert scrub, Sonoran Desert scrub. Sandy and gravelly washes in the desert. Dry desert canyons. 150 to 1095meters elevation
Lincoln rockcress *Boechera lincolnensis*	Perennial that grows on carbonate soils in chenopod(saltbush) and Mojave desert scrub plant communities. The historical distribution was limited to Inyo County and extending to Utah. It has since been found in the San Bernardino and Kingston mountain ranges, elevations from 3600 feet to 8800 feet.
Alkali mariposa lily *Calochortus striatus*	Alkaline meadows and in moist areas in creosote bush scrub. Historically distributed from Mojave Desert at the northern base of the San Bernardino and San Gabriel Mountains east to Las Vegas.
Pygmy poppy *Canbya candida*	Grows in sand flats in creosote bush scrub, Joshua tree woodland. Western Mojave from Walker Pass to Victorville. 2000 to 4000 feet elevation.
White-bracted spine flower *Chorizanthe xanti* var. *leucotheca*	Annual herb. Mojave Desert scrub, pinyon juniper woodlands. 300 to 1200 meters in elevation.
Booth's evening primrose *Eremothera boothii* ssp. *boothii*	Annual herb. Joshua tree woodland, and pinyon-juniper woodland in the Therange for this species is in the Mojave and Colorado deserts. It blooms from April through September at elevations from 2600 to 7900 feet.

Survey for the above-mentioned plants periods ranged from April to July depending on species. Transects for rare plants were conducted concurrent with the MGS surveys. Transects were walked over the entire site on April 6, May 26, and July 7.

4.0 LITERATURE REVIEW

Prior to beginning field surveys, resource specialists were consulted and available information from resource management plans and relevant documents were reviewed to determine the locations and types of biological resources that have the potential to exist within and adjacent to the study area; resources within several miles of the Project Site were evaluated.

The materials reviewed included, but were not limited to, the following:

8. U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2013a);
9. USFWS Ventura Field Office Species List for San Bernardino County (2013b);
10. California Natural Diversity Database maintained by the California Department of Fish and Wildlife (CDFW 2013);
11. California Native Plant Society (CNPS) Electronic Inventory (CNPS 2013);
12. Aerial Photographs (Microsoft Corporation 2013); and
13. Previous biological reports prepared for nearby sites (Brylski 2012; CASC 2022, Vergne 2017, 2020,2021)
14. Leitner Current Status of MGS.

5.0 METHODS FOCUSED SURVEYS

Mohave Ground Squirrel

Survey methods were derived from generally accepted professional standards including the 2010 California Department of Fish and Game Mohave Ground Squirrel Survey Guidelines (CDFG 2010); and performed under the auspices of a Memorandum of Understanding (MOU) with the CDFW.

Per protocol, since no MGS were captured, three five-day trapping session were conducted.

Within the grid, 100 traps were deployed at less 35-meter (m) spacing due to property size (Figure 6). The grid consisted of a ten by ten array covering most of the site. Standard small-mammal aluminum, foldable, ventilated 12–inch Sherman Traps were used within the Project Site for sampling purposes. The bait used consisted of crushed four-way grains with horse supplement. Folding cardboard boxes held down by dirt were deployed as shade covers for each trap as appropriate. Traps and shade covers were configured to provide the greatest shade cover possible.

Figure 6. MGS Trapping Grid



Temperature readings were taken and recorded every hour, at 1 foot above the ground and at ground level in the shade. Traps were checked every 1-2 hours depending on temperature and other environmental influential factors (i.e., pregnant or lactating females in traps, feral dogs on grid, cold weather, presence of juveniles, etc.). Traps were open within 1 hour after sunrise and closed within 1 hour before sunset. Traps were closed when air temperature reached 90 °F. Traps were not opened until AM temperatures reached 50 °F. No rain occurred during the surveys. Weather data is given in Table 6.

During live trapping surveys, plants were identified to the lowest taxonomic level sufficient to determine whether the plant species observed were non-native, native, or special-status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin et al. 2012). Scientific and common species names were recorded. The presence of a wildlife species was based on direct observation and/or wildlife

sign (e.g., tracks, burrows, nests, scat, or vocalization). Field data compiled for wildlife species included scientific name, common name, and evidence of sign when no direct observations were made. Wildlife of uncertain identity was documented and subsequently identified from specialized field guides and related literature. A reference list is provided in Section 9.0.

Desert Tortoise

Desert tortoise surveys were conducted according to protocol by covering the entire project site by walking east to west transects ten meters apart, and the zone of influence surveys-ZOI.

Surveys were conducted on April 8 and 9 of 2022.

The zone of influence **(ZOI)** includes parallel transects of 100, 300, 600, 1200 and 2400-feet for Tortoises. The zone of influence was completed until being bisected by the Canal, fencing, development and private property boundaries.

Survey temperatures ranged from mid-fifties to mid-eighties, and winds ranged from 5 to 12 mph.

6.0 SURVEY RESULTS

Project Site in Relation to MGS Historical Range

The project site is located at the southern margin of the historical range for the Mohave ground squirrel. There are several MGS records in the California Natural Diversity Database (CNDDB) in the project vicinity. These are as follows:

- 6.2 miles north, 4 miles W Hesperia, near Mountain View. One male captured on July 1, 1977. This site is 1.45 miles N of the project site.
- 1.5 miles SSW Duncan Corners, Sunset Ridge. One juvenile captured on July 13, 2005. This site is 1.3 miles N of the project site.
- Hesperia (exact location uncertain). One individual was collected on March 9, 1921. This site is approximately 3.3 miles SE of the project site.
- Victorville. One individual collected on March 2, 1919. This site is 7.6 miles NNE of the project site.
- 3.2 miles NW Adelanto Post Office. One juvenile captured on June 24, 2011. This site is 5.3miles NW of the project site.
- Victorville, near Adelanto Road, west of Mojave Heights. Two individuals detected on June 3, 1980. This site is 9.5miles NNE of the project site.

Leitner (2012), in a review of the status of the MGS, examined the results of MGS trapping surveys throughout the species' range for the period 1998-2007. There have been a number of MGS surveys in the project vicinity. Two of these surveys, one carried out in 1977 and the other in 2005, yielded MGS captures in the project vicinity. These results are included in the CNDDB.

MGS Survey Results Trapping Dates, Grid Location, Weather, Capture Data are presented in Tables 4,5,6, 7, and 8.

Table 4. Trapping Dates MGS

Grid No.	First Session	Second Session	Third Session
1	**04/5 to 04/9 2022**	**05/23 to 05-27 2022**	**06/14 to 06/18 2022**

Table 5 MGS Grid Census Locations

Grid No. and Trapping Sessions 1-3	Grid Corners
Grid 1 – Three Sessions	SW 34 26 10.7 N 117 22 49.25 W NW 34 26 13.96 N 117 22 49.66 W NE 34 26 14.82 N 117 22 49.25 W SE 34 26 10.84 N 117 22 26.59 W

Center point of grid was 34 26 11.93 N and 117 22 37.97 W.

Table 6. Weather Summary

WEATHER CONDITIONS	Temp. Air Min F.	Temp. Air Max F.	Temp. Soil Min F.	Temp. Soil Max F.	Cloud Cover % AM	Cloud Cover % PM	Wind Min Mph	Wind Max Mph
Session 1								
April 5	**55**	**81**	**57**	**84**	**10**	**10**	**3**	**7**
April 6	**54**	**81**	**55**	**83**	**10**	**20**	**5**	**9**
April 7	**50**	**84**	**53**	**84**	**0**	**0**	**3**	**7**
April 8	**55**	**86**	**55**	**87**	**0**	**0**	**5**	**10**
April 9	**57**	**83**	**56**	**85**	**0**	**0**	**5**	**12**
Session 2								
May 23	**61**	**91**	**63**	**94**	**0**	**10**	**3**	**5**
May 24	**61**	**93**	**63**	**96**	**15**	**20**	**3**	**8**
May 25	**64**	**95**	**62**	**96**	**20**	**20**	**3**	**10**
May 26	**66**	**90**	**64**	**93**	**00**	**00**	**5**	**10**
May 27	**61**	**85**	**64**	**89**	**10**	**10**	**5**	**9**
Session 3								
June 14	**59**	**91**	**62**	**93**	**0**	**0**	**3**	**9**
June 15	**63**	**97**	**64**	**99**	**5**	**10**	**5**	**10**
June 16	**68**	**98**	**68**	**99**	**10**	**00**	**4**	**12**
June 17	**63**	**85**	**65**	**87**	**0**	**0**	**5**	**10**
June 18	**54**	**77**	**58**	**80**	**0**	**0**	**5**	**9**

AM and Min. Readings at 06:00
PM and Max Readings at 15:00

Table 7. MGS Live Tapping Data Summary

Category	Grid A Individuals (recaptures)	Total for Project Individuals
Trap Hours, Per Trap	178	178
Captures Totals All Species	18 (14)	18
MGS Captures	0	0
MGS Adult Male Captures	0	0
MGS Adult Female Captures	0	0
MGS Juvenile Male Captures	0	0
MGS Juvenile Female Captures	0	0
MGS Unknown Sex	0	0
AGS Captures	13(7)	5
AGS Adult Male Captures	5 (3)	2
AGS Adult Female Captures	7 (4)	3
AGS Juvenile Male Captures	0	0
AGS Juvenile Female Captures	1 (0)	1
AGS Unknown Sex	0	0
Number Of Species Captured	2	2

The California ground squirrel (*Spermophilus beecheyi)* was also captured (2 Adults and 3 juveniles).

Table 8. Sensitive Animals and Habitat on Palmetto Site

REPTILES				
Desert tortoise *Gopherus agassizii*	Historically found throughout the Mojave and Sonoran Deserts into Arizona, Nevada, and Utah. Occurs throughout the Mojave Desert in scattered populations. Found in creosote bush scrub, saltbush scrub, thornscrub (in Mexico), and Joshua tree woodland. Found in the open desert as well as in oases, riverbanks, washes, dunes, and occasionally rocky slopes.	February - June, all deserts Aug - Sep primarily eastern deserts. Can be present throughout year	FED: THR STATE: THR	Not present. Sign not observed on the property or zone of influence during the focused surveys.
BIRDS				
Northern harrier *Circus cyaneus*	Grassland and marshy habitats in Southern California. Uncommonly in open desert and brushlands.	Year round	FED: ND STATE: CSC	Low. Not observed during the surveys. Forages over a wide range of open habitat and can be expected to occur throughout most of Southern California. Although no

				nesting habitat was found, foraging habitat exists on site.
Sharp-shinned hawk *Accipiter striatus*	Nests in woodland, coniferous deciduous forest. Winter visitor and migrant to coastal Southern California. Forages over a variety of habitats.	Fall & winter; scarce in summers	FED: ND STATE: CSC	Low. Not observed during the surveys, but are expected to forage infrequently over the property during migration and in winter.
Cooper's hawk *Accipiter cooperi*	Woodland and semi-open habitats, riparian groves and mountain canyons. Uncommon permanent resident in coastal, mountains, and deserts of Southern California. Transients fairly common on coast in fall.	Year round; predominant in summer	FED: ND STATE: CSC	Low. Not observed during the surveys, but are expected to forage infrequently over the property during migration and in winter.
Ferruginous hawk *Buteo regalis*	Fairly common in winter in open grassland and agricultural regions in the interior, as well as some valleys along the coast. Rare and uncommon along the coast and in the desert.	Winter	FED: C2* STATE: CSC	Low. Not observed during the surveys. Poor quality foraging habitat for this species exists on site. No suitable nesting habitat occurs on site.
Prairie falcon *Falco mexicanus*	Nest in cliffs or rocky outcrops; forage in open arid valleys, agricultural fields. Throughout the desert and arid interior	Year round diurnal	FED: ND STATE: CSC	Low. Not observed during the surveys. Foraging habitat exists for this

	portions of coastal counties. Uncommon resident in Southern California.			species over the property, no suitable nesting habitat.
Burrowing owl *Athene cunicularia hypugea*	Grasslands and rangelands, usually occupying ground squirrel burrows. Resident over most of Southern California. Found in agricultural areas.	Year round	FED: ND STATE: CSC	Low. No burrows were observed on site, but this species may forage on site and nest in adjacent areas.
Le Conte's thrasher *Toxostoma lecontei*	Uncommon and local resident in low desert scrub throughout most of the Mojave Desert, extending up into the southwestern corner of the San Joaquin Valley. Breeding range extends from these areas into eastern Mojave, north into the Owens Valley and south into the lower Colorado Desert, and eastern Mojave. Also recorded from southern Nevada and Utah, as well as western Arizona and New Mexico.	Year round	FED: ND STATE: CSC	Moderate. This species may nest and forage on site. Was not observed during recent surveys.
Bendire's thrasher *Toxostoma bendirei*	Breeds in thorny shrubs and cactus in Joshua tree woodland with scattered desert shrubs such as creosote bush and burrobush primarily in eastern San Bernardino County. Also occur in the eastern Mojave in	Resident February - August	FED: ND STATE: CSC	Moderate. Not observed during the surveys; however, suitable breeding and foraging habitat

	areas with high numbers of *Opuntia*, or cholla, cactus. Common summer resident in Joshua Tree National Monument.			exist on the property.
Loggerhead shrike *Lanius ludovicianus*	Open fields with scattered trees, open woodland, scrub. Fairly common resident throughout southern California.	Year round	FED: ND STATE: CSC	Present. No nests observed. This species may nest in Joshua trees, and forage on site.
MAMMALS				
California leaf-nosed bat *Macrotus californicus*	In California, these bats primarily occupy low-lying desert areas, where they roost in caves, mines, and old buildings. Historic records extend west to near Chatsworth, Los Angeles County, but most populations from the California coastal basins are believed to have disappeared. Occurs from northern Nevada, Southern California, and western Arizona south to southern Baja California and Sonora.	Year round nocturnal	FED: ND STATE: CSC	Low. Because there are no suitable roost sites in the property limits this species does not roost on the property. However, it may forage over the property if there are roosting sites nearby.
Spotted bat *Euderma maculatum*	Found in the western North America from southern British Columbia to the Mexican border, at a small number of widely	Spring, Summer, Fall Nocturnal	FED: ND STATE: CSC	Low. Because there are no suitable roost sites in the property limits, this species does

	scattered localities. Habitats range from arid deserts and grasslands through mixed conifer forest up to 10,600 foot elevation. Prefers rock crevices in cliffs, also uses caves and buildings.	Hibernates in Winters		not roost on the property. However, it may forage over the property if there are roosting sites such as caves in the nearby mountains.
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	Variety of habitats including herbaceous and desert scrub areas, early stages of open forest and chaparral. Most common in relatively open habitats. Restricted to the cismontane areas of Southern California, extending from the coast to the Santa Monica, San Gabriel, San Bernardino and Santa Rosa mountain ranges.	Year round, diurnal and Crepuscular activity	FED: ND STATE: CSC	Present. Jackrabbits were observed during the field surveys, but the geographic location of the property indicates that the individuals observed belonged to the desert race, and not the coastal race.
Mohave ground squirrel *Spermophilus mohavensis*	Creosote bush scrub, saltbush scrub and Joshua tree woodland. This species is found in the open desert, at oases, along riverbanks, and washes, in dunes and on rocky slopes. Its known habitat extends from San Bernardino north to Kern and Inyo counties.	Active in spring	FED: ND STATE: THR	Not present per focused survey. Low quality habitat occurs on site
Grasshopper mouse	In the more arid regions of southern California. Especially prefers sandy	Year round	FED: ND STATE: CSC	Moderate probability.

Onychomys torridus ramona	areas of the Mojave, Sonoran deserts.			
SENSITIVE HABITATS				
Joshua tree woodland	Most of the Mojave Desert and parts of the Colorado Desert.	Year round	Protected by local ordinance	A Joshua tree woodland does not occur on site, but individual Joshua trees are scattered and present over the site. Survey and mapping performed.
Jurisdictional Drainages and Vernal Pools				
Drainages			Protected by Federal, State, and local ordinance	There are no jurisdictional drainages on site*
Vernal Pools			Protected by Federal, State, and local ordinance	There are no vernal pools nor suitable soils on site for vernal pools to occur.

*• **Site:** Does not have a USGS delineated “Blue Line Stream”.

- **100-Year-Flood Plain Designation:** The Site is not within a "Designated Flood Plain".
- **Dominate Upstream Desert Alluvial Fan Channel:** The Site does not have a "Dominate upstream desert alluvial fan channel" that has become undefined due to lower slope and braiding of typical desert type alluvial fan morphology, therefore no potentially significant upstream off-site concentrated or sheet flows are formed from an alluvial fan that would be of an issue impacting the Site.
- **Ephemeral Natural Drainage Course(s):** The Site does not have any "Significant Native or Altered Ephemeral” drainage course(s) bisecting the Site. The City of Palmdale (Upstream Development or Road improvements) typically concentrates the flows of these natural "Ephemeral Drainage Courses”.

Legend

FEDERAL*:* Federal Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
PE	Taxa proposed to be listed as endangered
PT	Taxa proposed to be listed as threatened
C2*	The U.S. Fish and Wildlife Service (USFWS) revised its classifications of candidate taxa (species, subspecies, and other taxonomic designations). The former designation of "Category 2 Candidate for listing" has been discontinued. The USFWS will continue to assess the need for protection of these taxa and may, in the future, designate such taxa as Candidates. NRA, Inc. has noted the change in species status by marking with an asterisk (*) those C2 candidates that were removed from the list.
C	Candidate for listing. Refers to taxa for which the USFWS has sufficient information to support a proposal to list as Endangered or Threatened and issuance of the proposal is anticipated but precluded at this time.
ND	Not designated as a sensitive species

STATE: State Classifications

END	Taxa listed as endangered
THR	Taxa listed as threatened
CE	Candidate for endangered listing
CT	Candidate for threatened listing
CFP	California Fully Protected. Species legally protected under special legislation enacted prior to the California Endangered Species Act.
CSC	California Species of Special Concern. Taxa with populations declining seriously or that are otherwise highly vulnerable to human development.
SA	Special Animal. Taxa of concern to the California Natural Diversity Data Base regardless of their current legal or protected status.
ND	Not designated as a sensitive species

CNPS: California Native Plant Society Classifications

1A	Plants presumed by CNPS to be extinct in California
1B	Plants considered by CNPS to be rare or endangered in California and elsewhere
2	Plants considered by CNPS to be rare, threatened or endangered in California, but which are more common elsewhere
3	Review list of plants suggested by CNPS for consideration as endangered but about which more information is needed.
4	Watch list of plants of limited distribution whose status should be monitored.

Occurrence Probabilities

Occurs	Observed on the site during this study or recorded on site by other qualified biologists
Expected	Not observed or recorded on site, but likely to be present at least during a portion of the year
High	Known to occur in the vicinity of the project site. Suitable habitat exists on site.
Moderate	Known to occur in the vicinity of the project site. Small areas of or marginally suitable habitat exists on site.
Low	No reported sightings within the vicinity of the project. Available habitat limited and rarely used.
None	Focused surveys did not locate the species, or suitable habitat does not exist on site.
Unknown	No data is available on whether species is on or in the vicinity of the site, and information about the species is insufficient to make an accurate assessment of probability occurrence.

7.0 IMPACTS AND RECOMMENDATIONS

The MGS was not captured on the current project site during the 2022 protocol survey as described in this report.

No sign of desert tortoise was observed during the 100 percent coverage of the site or the ZOI surveys. The desert tortoise is not present within the proposed project footprint nor the zone of influence.

No rare plants were documented on site.

The Project Site does not currently support MGS, desert tortoise, nor rare plants.

Implementation of the Project will not result in the loss of individual MGS, nor will it adversely affect local or regional MGS populations; it will not result in the take of DT nor in impacts to occupied habitat; no rare plants were documented on site and no take will occur.

There are no blue line streams on site. There are no jurisdictional drainages on site. There are no vernal pools nor suitable soils for vernal pools on site.

8.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached figures present the data and information required for this resource assessment, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Field work conducted for this investigation was performed by me. I certify that I have not signed a nondisclosure or consultant confidentiality agreement nor do I have any financial interest in the Project.

DATE: September 9, 2022 SIGNED: Philippe Jean Vergne

Report Author Philippe Vergne

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Vergne P. Focused Survey for Mohave Ground Squirrel Amethyst Basin 2017 for Kidd Biological Consulting

Vergne P. Phase One Habitat Survey for Mohave Ground Squirrel US Cold Storage 2020

Appendix A Mohave Ground Squirrel (MGS) Trapping Summary Form

Mohave Ground Squirrel (MGS) Survey and Trapping Form

Part I – PROJECT INFORMATION (use a separate form for each sampling grid)

Project name: Palmetto Way Warehouse___` Property Owner: NA

Location: Township 4N___; Range 5W_; Section 14 ; ¼ Section NE 1/4 _SE 1/4

Quad map/series: Baldy Mesa_ UTM coordinates **Center of grid 34 26 11.93 N and 117 22 37.97 W**

GPS coordinates of trapping grid corners:

MGS Grid Census Locations

Grid No. and Trapping Sessions 1-3	Grid Corners
Grid 1 – Three Sessions	SW 34 26 10.7 N 117 22 49.25 W NW 34 26 13.96 N 117 22 49.66 W NE 34 26 14.82 N 117 22 49.25 W SE 34 26 10.84 N 117 22 26.59 W

Acreage of Project Site: 30.52 acres ___ Acreage of potential MGS habitat on site 30.52 acres_

Total acreage visually surveyed on project site: 30.52 acres

Visual surveys conducted by: Philippe Vergne of ENVIRA

Total acres trapped: 26 acres

Number of sampling grids: 1

Trapping conducted by:_____Philippe Vergne of ENVIRA___

Dates of sampling term(s): (all 2022)
FIRST April 5-9, SECOND _May 23 to 27 THIRD June 14 to 18
Site Elevation 3,220

Weather Summary

WEATHER CONDITIONS	Temp. Air Min F.	Temp. Air Max F.	Temp. Soil Min F.	Temp. Soil Max F.	Cloud Cover % AM	Cloud Cover % PM	Wind Min Mph	Wind Max Mph
Session 1								
April 5	**55**	**81**	**57**	**84**	**10**	**10**	**3**	**7**
April 6	**54**	**81**	**55**	**83**	**10**	**20**	**5**	**9**
April 7	**50**	**84**	**53**	**84**	**0**	**0**	**3**	**7**
April 8	**55**	**86**	**55**	**87**	**0**	**0**	**5**	**10**
April 9	**57**	**83**	**56**	**85**	**0**	**0**	**5**	**12**
Session 2								
May 23	**61**	**91**	**63**	**94**	**0**	**10**	**3**	**5**
May 24	**61**	**93**	**63**	**96**	**15**	**20**	**3**	**8**
May 25	**64**	**95**	**62**	**96**	**20**	**20**	**3**	**10**
May 26	**66**	**90**	**64**	**93**	**00**	**00**	**5**	**10**
May 27	**61**	**85**	**64**	**89**	**10**	**10**	**5**	**9**
Session 3								
June 14	**59**	**91**	**62**	**93**	**0**	**0**	**3**	**9**
June 15	**63**	**97**	**64**	**99**	**5**	**10**	**5**	**10**
June 16	**68**	**98**	**68**	**99**	**10**	**00**	**4**	**12**
June 17	**63**	**85**	**65**	**87**	**0**	**0**	**5**	**10**
June 18	**54**	**77**	**58**	**80**	**0**	**0**	**5**	**9**

AM and Min. Readings at 06:00
PM and Max Readings at 15:00
Live Tapping Data Summary

MGS were not detected in the Project Site or within any census grids during any of the three live trapping sessions. Only the AGS and California Ground squirrel were trapped within the grid.

Total trap hours were in excess of 172 hours, averaging approximately 11.5 hours per day or 57.5 hours per live trapping event. There were no MGS captures. AGS capture totals were low at 17 representing 8 individuals.

Part II – GENERAL HABITAT DESCRIPTION

The disturbed annual grasslands and understory on site are dominated by fiddleneck, brome, and forbs. Joshua Tree are scattered throughout the site. Scrub community is dominated by Saltbush, California Juniper, and isolated creosote bush

Site Vegetation

Common name	Scientific name
California juniper	*Juniperus californica*
Burro Bush or white bur sage	*Ambrosia dumosa*
Desert sunflower	*Geraea canescens*
Fremont pincushion	*Chaenactis fremontii*
Cheese bush	*Hymenoclea salsola*
Antelope bush	*Purshia tritendata*
Flat-topped buckwheat	*Eriogonum plumatella*
California buckwheat	*Eriogonum fasciculatum*
Great Basin sagebrush	*Artemisia tritendata*
Coopers box-thorn	*Lycium cooperi*
Desert sage	*Salvia dorii*
Woody bottle washer	*Camissonia boothii*
Plantain	*Plantago insularis*
Cotton thorn	*Tetradymia axillaris*
Creosote bush	*Larrea tridentata*
Hop sage	*Grayia sinosa*
Snakeweed	*Gutierrezia microcephala*
Rabbit brush	*Chrysothamnus nauseosus*
Nevada ephedra	*Ephreda nevadensis*
Joshua tree	*Yucca brevifolia*

Common name	Scientific name
Red brome	*Bromus madritensis*
Cheat grass	*Bromus tectorum*
Perennial bluegrass	*Poa secunda*
Meditarrean grass	*Schismus barbatus*
Red stemmed filaree	*Erodium cicutarium*

Land form (mesa, bajada, wash): Mesa adjacent to commercial warehouses and rural housing. The project site is an undeveloped portion north of Palmetto Way, to the West of Amargosa Road (adjacent to the 15 Freeway). The valley floor is almost flat (approximately 1.25% slope to the southeast).

Soils description: The soils on the site are Cajon sands, and Hesperia loamy fine sands

Elevation: 3,443 to 3,468 Slope: estimated 1.25% slope to southeast

Appendix B MOU

—

State of California - Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Wildlife Branch
1812 9th Street
Sacramento, CA 95811
http://www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

Expiration Date: December 31, 2021

MEMORANDUM OF UNDERSTANDING

Philippe J. Vergne (SC-002835)
Principal Investigator
ENVIRA

Research on Mohave Ground Squirrel in California

May 7, 2018
(This supersedes the MOU issued on September 26, 2012)

This Memorandum of Understanding (MOU) is issued pursuant to California Code of Regulations Title 14 Section 783.1(a), and Fish and Game Code (FGC) Section 2081(a) of the California Endangered Species Act (CESA) whereby through permits or memorandums of understanding, the Department of Fish and Wildlife (Department) may authorize individuals, public agencies, universities, zoological gardens, and scientific or educational institutions, to import, export, take, or possess any endangered species, threatened species, or candidate species for scientific, educational, or management purposes.

This MOU is a legal instrument connected to your Scientific Collecting Permit (**SCP; SC-002835**) pursuant to Fish and Game Code Section 1002 and CCR Title 14 Section 650, referenced herein for the purpose of linking the two regulatory documents and all authorized research activities.

MOUs issued pursuant to Fish and Game Code 2081(a) generally do not cover "movement out of harm's way" during project activities (as defined in Public Resources Code 21065) unless part of the project's purpose is to contribute to recovery of the species. Incidental take, as well as movement out of harm's way to avoid lethal take, of CESA-listed or fully protected species associated with project activities is typically authorized by the Department Regional Office with jurisdiction over the project site through separate permits issued pursuant to other Fish and Game Code sections such as 2081(b) or 2835.

Authorized Species and Research Activities

The Department authorizes you to conduct the following scientific research methods and activities on the CESA-listed threatened Mohave ground squirrel (*Xerospermophilus mohavensis;* squirrel):

a) search (survey) for, including the capture using live-traps;

Renewed October 2021.

APPENDIX D
Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project

DUKE CRM

18 Technology Dr., Ste. 103
Irvine, CA 92618
949-356-6660
www.dukecrm.com

September 23, 2022

Anthony DeLuca
CASC Engineering & Consulting
1470 E. Cooley Drive
Colton, CA 92324

Subject: Cultural and Paleontological Resources Assessment for Palmetto Way Industrial Building Project, City of Hesperia, San Bernardino County, California (DUKE Project Number C-0413)

Dear Mr. DeLuca:

At the request of the CASC Engineering & Consulting (CLIENT), Duke Cultural Resources Management, LLC (DUKE CRM) has prepared a cultural and paleontological resources assessment for the Palmetto Way Industrial Building Project (Project), located in the City of Hesperia, San Bernardino County, California. The Project is 34 acres in size. The City of Hesperia is the lead agency for California Environmental Quality Act (CEQA).

The Project is located in the High Desert within APNs 0405-072-52, 53, 54, and 55 in Section 14, Township 4 North, Range 5 West, as shown on the USGS *Baldy Mesa, & Hesperia, Calif.* 7.5-minute quadrangle map (see Attachment 1 for Project Maps). The Project will construct a 498,500 square foot Industrial Warehouse Building with up to 25,000 square feet of office space. The proposed Project will include 76 loading dock doors, 182 truck/trailer parking spaces and 281 auto parking spaces on four (4) parcels. Maximum depth of excavation of approximately eight (8) to 10 feet.

This report includes the result of our research and field survey for cultural and paleontological resources.

Research

On May 18, 2022, DUKE CRM submitted a request for a records search by the South Central Coastal Information Center (SCCIC) for the Project. The SCCIC located at the California State University, Fullerton is part of the California Historical Resources Information System. However, due to a SCCIC backlog, the records search was performed by DUKE CRM staff archaeologist Morgan Bender on September 12, 2022. It included a review of all recorded cultural resources within a ½-mile radius of the Project, as well as a review of known cultural resource survey and excavation reports.

The records search identified three (3) cultural resources within ½ mile of the Project, none of which are located within the current Project area. Resource P-36-0021351 is the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR)-eligible California Aqueduct located 670 feet from the southwest corner of the Project. Resource P-36-021288, located 2400 feet northeast of the Project area, is a mid-20th century trash deposit consisting primarily of cans; CRHR eligibility has not been determined. P-36-021366 is a mid-20th century trash scatter. CRHR eligibility has not been determined.

The SCCIC identified seven (7) cultural reports within ½ mile of the Project, three (3) of which overlap with the Project area (Table 1). No resources were identified within the Project area by any of these previous investigations.

Table 1. Reports within the Project Boundary

Report No.	Year	Report Title	Author(s)
SB-04975	2005	Historical/Archaeological Resources Survey Report: Baldy Mesa Water District Arsenic Treatment Project, Cities of Victorville and Hesperia, San Bernardino County, California.	Matthew Wetherbee
SB-06859	2010	Identification and Evaluation of Historic Properties: Town of Apple Valley and City of Hesperia Wastewater Reclamation Plants and Related Facilities Project, Victor Valley Area, San Bernardino County, California.	Tang, Bai "Tom", Terri Jacquemain, Daniel Ballester, and Harry Quinn
SB-07494	2013	G.O. 131-D Victor-Aqueduct-Phelan 115kV Replacement Project.	Clark, Fatima V. and Dave Hanna

Additionally, an inquiry to the Native American Heritage Commission (NAHC) was submitted to ascertain the presence of known sacred sites, Native American cultural resources, and/or Native American human remains within the boundaries of the proposed Project. On June 21, 2022, the NAHC the Sacred Lands File indicated Native American cultural resources have been identified within the general vicinity of the Project location (see Attachment 2).

DUKE CRM conducted a review of online historical aerial photographs and historical USGS quad maps utilizing University of California, Santa Barbara FrameFinder, historicaerials.com, and USGS Historical Topographic Map Explorer. The Hesperia 1:62,500 scale map from 1902 does not show any trails, roads, buildings or structures within the Project area. By 1942, a few trails are located in the vicinity of the Project area but not within its boundaries (Hesperia 1:62,500 1942). The predecessor to U.S. 395/I-15 has been constructed by 1942, as are several power transmission lines. A basic network of roads is visible on the 1956 Baldy Mesa 1:24,000 quadrangle; they are a mix of maintained and unmaintained dirt roads. Additional roads were noted on the 1968 Baldy Mesa & Hesperia 1:24,000 maps, but the Project area remains undeveloped. The California Aqueduct is illustrated on the 1980 Baldy Mesa & Hesperia 1:24,000 maps to the south and west of the Project area.

Aerial imagery analysis verifies the map analysis (UCSB Framefinder 2022, HistoricAerials.com 2022). A 1952 aerial image illustrates minor road developments connecting sparsely distributed homesteads with the predecessor of U.S. 395/I-15 as a two-lane road. By 1968, the highway is well developed with off- and on-ramps. The road network around the Project area is well developed by 1986. The property to the south of the Project area is developed between 1995 and 2002. No development of the Project area is noted through 2018.

The geology in the vicinity of the Project has been mapped by Dibblee and Minch (2008). A review of this map indicates the proposed Project is located on primarily alluvial gravel from the Pleistocene period (*Qa*).

DUKE CRM requested that the Western Science Center (WSC) perform a paleontological records search for known fossil localities within, and in the vicinity of, the Project. On May 27, 2022, the WSC found that there have been no paleontological resources discovered within the Project area or within a one (1) mile search radius. But significant fossils have been discovered in similar sediments in other areas of southern California. The WSC recommends a paleontological mitigation program. The WSC classifies these deposits as having high paleontological sensitivity.

Field Survey

Morgan Bender, M.A., RPA, Archaeologist and Zachary Duke, Archaeological Technician conducted an intensive pedestrian survey of the Project on July 27, 2022. The survey area included all 34 acres in the area of the proposed Project with the exception of fenced 2.3 acre existing facility in the northwest corner. Transects

were spaced no more than 15 meters apart. The surface visibility was good, ranging from 90-100 percent. The area has little to no vegetation and scattered debris with a mean elevation of approximately 3,450 feet above mean sea level. A motocross track has been established on the eastern half of the Project area. See photographs in Attachment B. No cultural or paleontological resources were observed as a result of the field survey.

Conclusions

DUKE CRM assessed the proposed Project for impacts to cultural and paleontological resources according to CEQA. As a result of negative findings during the SCCIC records search and field survey, our assessment is that the Project has a low potential to impact cultural resources. Therefore, no further action is recommended with regards to cultural resources.

The Project is located on Pleistocene age (*Qa*) sediments. The Project is considered to have a high potential to impact paleontological resources. The WSC documents numerous fossil localities within similar deposits, but none noted within one (1) mile of the Project area. Research indicates that there is a high sensitivity for paleontological resources in the old alluvial deposits that underlie the Project. Therefore, significant and unique paleontological resources may be impacted by the project during earth disturbing activities in this area. These impacts would be considered potentially significant. In order to reduce the potential for impacts to paleontological resources to a level that is less than significant under CEQA, paleontological monitoring is recommended where ground disturbance exceeds four (4) feet below surface within the Project.

Paleontological Monitoring

A paleontological monitor shall be present during ground disturbing activities below four (4) feet in depth within the Project. The monitor shall work under the direct supervision of a qualified paleontologist (B.S./B.A. in geology, or related discipline with an emphasis in paleontology and demonstrated competence in paleontological research, fieldwork, reporting, and curation).

1. The qualified paleontologist shall be on-site at the pre-construction meeting to discuss monitoring protocols.
2. The paleontological monitor shall be present full-time during ground disturbance below 4 feet in depth within the Project, including but not limited to grading, trenching, utilities, and off-site easements. If, after excavation begins, the qualified paleontologist determines that the sediments are not likely to produce fossil resources, monitoring efforts shall be reduced.
3. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered.
4. In the event of a paleontological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified paleontologist has cleared the area.
5. In consultation with the qualified paleontologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly mapped, documented, removed, and the area cleared.
6. If the discovery is significant the qualified paleontologist shall notify the CLIENT and CITY immediately.
7. In consultation with the CLIENT and CITY the qualified paleontologist shall develop a plan of mitigation which will likely include full-time monitoring, salvage excavation, scientific removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find. If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The

County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify the Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Thank you for contacting DUKECRM on this interesting project. If you have any questions or comments, you can contact me at (714) 345-9883, or by e-mail at BrianGlenn@dukecrm.com.

Sincerely,

DUKE CULTURAL RESOURCES MANAGEMENT, LLC



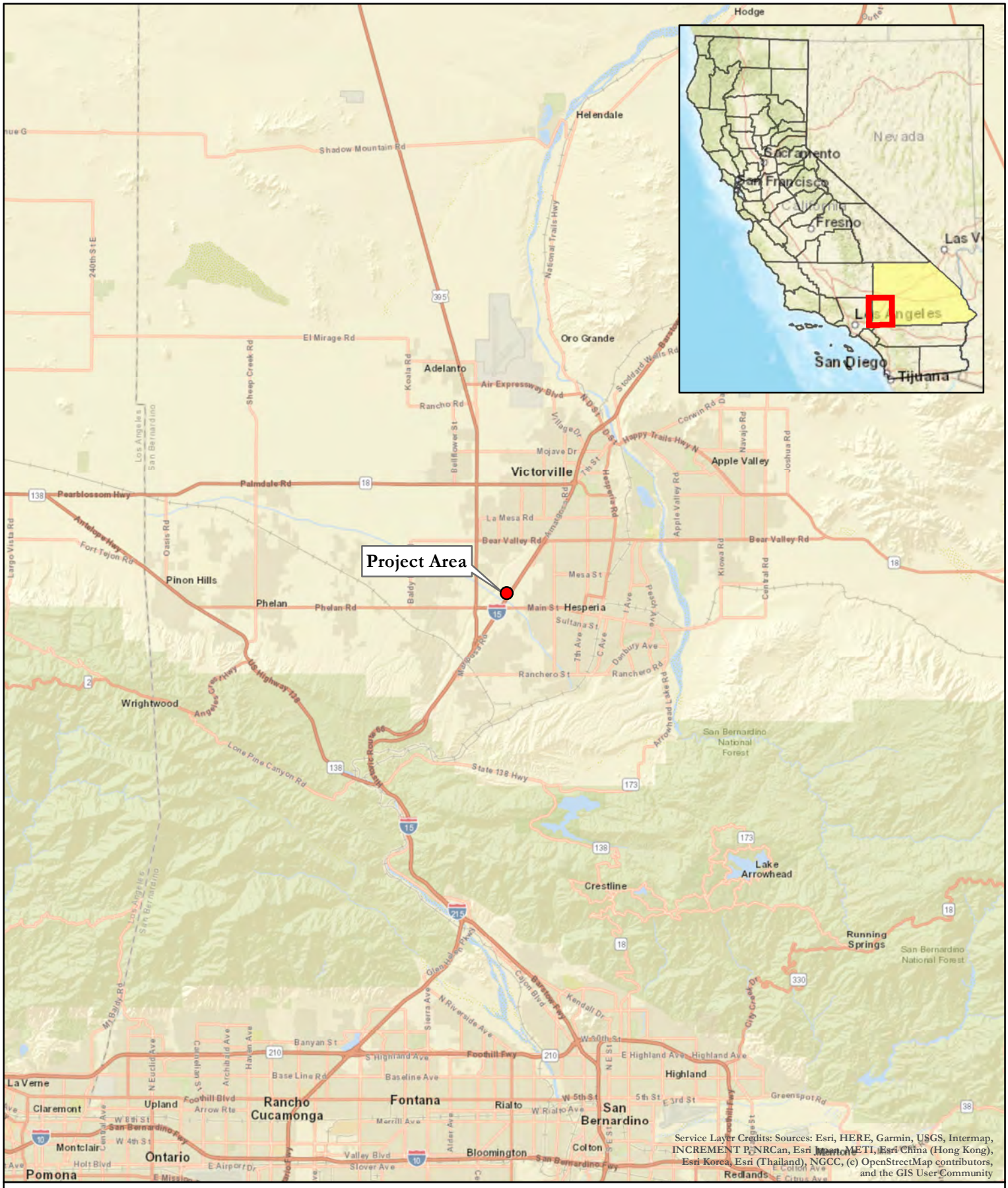
Brian Glenn, M.A., RPA
Archaeologist

Attachments

1: Project Maps
2: Native American Heritage Commission Letter
3: Project Photographs

ATTACHMENT 1

PROJECT MAPS



Map 1 - Project Vicinity

Palmetto Way Industrial Bldg, C-0413

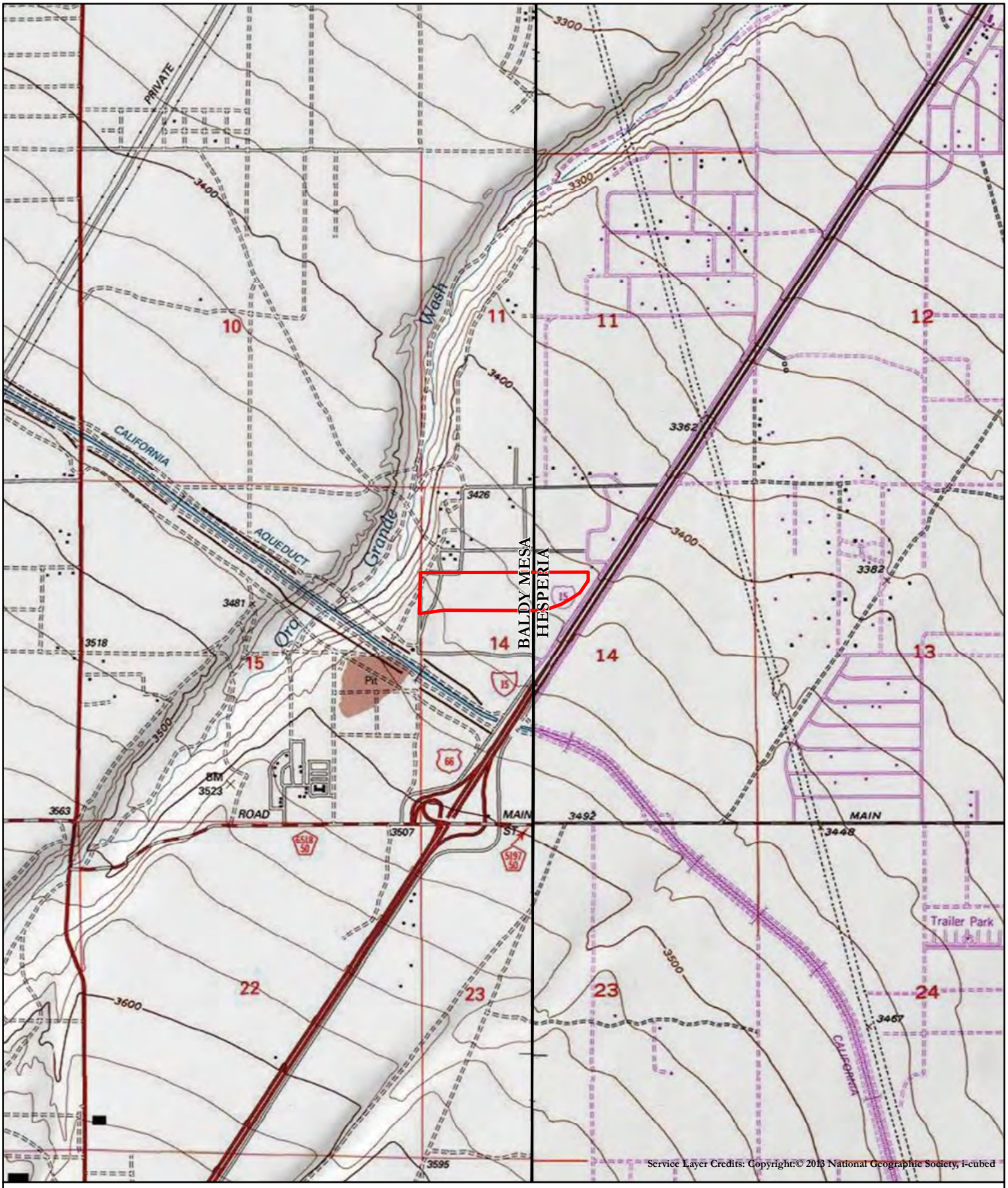
DUKE CRM

● Project Area

0 6 12 Miles

N

1 inch = 6 miles 1:360,000



Map 2 - Project Location
Palmetto Way Industrial Bldg, C-0413

DUKE CRM

Baldy Mesa & Hesperia, Calif USGS 7.5-minute quadrangle
T4N, R5W, Section 14
Date of Map: 1956 / Photorevised: 1980

Project Area
USGS 7.5' Quads

0 0.25 0.5 Miles
0 0.25 0.5 Kilometers
N
1 inch = 2,000 feet
1:24,000



Map 3 - Project Aerial Photo

Palmetto Way Industrial Bldg, C-0413

DUKE CRM

Project Area

0 175 350 Feet

N

1 inch =405 feet

1:4,860

ATTACHMENT 2

NATIVE AMERICAN HERITAGE COMMISSION LETTER

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

PARLIAMENTARIAN
Russell Attebery
Karuk

SECRETARY
Sara Dutschke
Miwok

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

COMMISSIONER
Wayne Nelson
Luiseño

COMMISSIONER
Stanley Rodriguez
Kumeyaay

EXECUTIVE SECRETARY
Raymond C. Hitchcock
Miwok/Nisenan

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

June 21, 2022

Brian Glenn
DUKECRM

Via Email to: brianglenn@dukecrm.com

Re: Palmetto Way Industrial (C-0413) Project, San Bernardino County

Dear Mr. Glenn:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Chemehuevi Indian Tribe and the San Manuel Band of Mission Indians on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/21/2022

Chemehuevi Indian Tribe
Sierra Pencille, Chairperson
P.O. Box 1976 1990 Palo Verde Drive
Havasu Lake, CA, 92363
Phone: (760) 858 - 4219
Fax: (760) 858-5400
chairman@cit-nsn.gov
Chemehuevi

Morongo Band of Mission Indians
Ann Brierty, THPO
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov
Cahuilla
Serrano

Morongo Band of Mission Indians
Robert Martin, Chairperson
12700 Pumarra Road
Banning, CA, 92220
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov
Cahuilla
Serrano

Quechan Tribe of the Fort Yuma Reservation
Jill McCormick, Historic Preservation Officer
P.O. Box 1899
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com
Quechan

Quechan Tribe of the Fort Yuma Reservation
Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com
Quechan

San Fernando Band of Mission Indians
Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net
Kitanemuk
Vanyume
Tataviam

San Manuel Band of Mission Indians
Jessica Mauck, Director of Cultural Resources
26569 Community Center Drive
Highland, CA, 92346
Phone: (909) 864 - 8933
Jessica.Mauck@sanmanuel-nsn.gov
Serrano

Serrano Nation of Mission Indians
Wayne Walker, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com
Serrano

Serrano Nation of Mission Indians
Mark Cochrane, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com
Serrano

Twenty-Nine Palms Band of Mission Indians
Darrell Mike, Chairperson
46-200 Harrison Place
Coachella, CA, 92236
Phone: (760) 863 - 2444
Fax: (760) 863-2449
29chairman@29palmsbomi-nsn.gov
Chemehuevi

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Palmetto Way Industrial (C-0413) Project, San Bernardino County.

Native American Heritage Commission
Native American Contact List
San Bernardino County
6/21/2022

Twenty-Nine Palms Band of Mission Indians
Anthony Madrigal, Tribal Historic Preservation Officer
46-200 Harrison Place Chemehuevi
Coachella, CA, 92236
Phone: (760) 775 - 3259
amadrigal@29palmsbomi-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Palmetto Way Industrial (C-0413) Project, San Bernardino County.

ATTACHMENT 3

PROJECT PHOTOGRAPHS



Site overview. View to northeast.



Site overview. View to southeast.



Site overview. View to east.



Site overview. View to west.



Ground visibility. Plan view.



Scattered modern debris. View to southeast.



Building located on the Project area. View to north.



Small faunal bone. Plan view.

APPENDIX E
Amargosa and Palmetto High-Cube Warehouse Energy Analysis

Amargosa and Palmetto High-Cube Warehouse

ENERGY ANALYSIS

CITY OF HESPERIA

PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Ali Dadabhoy
adadabhoy@urbanxroads.com

FEBRUARY 1, 2023

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LIST OF ABBREVIATED TERMS

%	Percent
(1)	Reference
AQIA	*Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis*
BACM	Best Available Control Measures
BTU	British Thermal Units
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
City	City of Hesperia
CPEP	Clean Power and Electrification Pathway
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EIA	Energy Information Administration
EPA	Environmental Protection Agency
EMFAC	EMissions FACtor
FERC	Federal Energy Regulatory Commission
GHG	Greenhouse Gas
GWh	Gigawatt Hour
HHDT	Heavy-Heavy Duty Trucks
hp-hr-gal	Horsepower Hours Per Gallon
IEPR	Integrated Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
ITE	Institute of Transportation Engineers
kBTU	Thousand-British Thermal Units
kWh	Kilowatt Hour
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy Duty Trucks
MARB/IPA	March Air Reserve Base/Inland Port Airport
MDV	Medium Duty Trucks
MHDT	Medium-Heavy Duty Trucks

MMcfd	Million Cubic Feet Per Day
mpg	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Amargosa and Palmetto High-Cube Warehouse
PV	Photovoltaic
SCAB	South Coast Air Basin
SCE	Southern California Edison
SDAB	San Diego Air Basin
sf	Square Feet
SoCalGas	Southern California Gas
TEA-21	Transportation Equity Act for the 21st Century
U.S.	United States
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Amargosa and Palmetto High-Cube Warehouse Energy Analysis* is summarized below based on the significance criteria in Section 5 of this report consistent with Appendix G of the 2020 California Environmental Quality Act (CEQA) Statute and Guidelines (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	5.0	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the federal and state agencies that regulate energy use and consumption through various means and programs. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of energy usage include:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)
- The Transportation Equity Act for the 21st Century (TEA-21
- Integrated Energy Policy Report (IEPR)
- State of California Energy Plan
- California Code Title 24, Part 6, Energy Efficiency Standards
- California Code Title 24, Part 11, California Green Building Standards Code (CALGreen)
- AB 1493 Pavley Regulations and Fuel Efficiency Standards
- California's Renewable Portfolio Standard (RPS)
- Clean Energy and Pollution Reduction Act of 2015 (SB 350)

Consistency with the above regulations is discussed in detail in section 5 of this report.

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Amargosa and Palmetto High-Cube Warehouse Project (Project). The purpose of this report is to ensure that energy implication is considered by the City of Hesperia (Lead Agency), as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The proposed Project is located on the northwest corner of Amargosa Road, and Palmetto Way in the City of Hesperia as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,850[1] square high-cube fulfillment center warehouse building as shown on Exhibit 1-B. The proposed project is anticipated to be constructed and fully operational by year 2024.

It is expected that the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. This analysis includes a conservative assumption of on-site Project-related emission sources for potential future tenants, including architectural coatings, consumer products, landscape maintenance equipment, natural gas, electricity, mobile operations, and on-site cargo handling equipment. This analysis is intended to describe air quality impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this report assumes the Project would operate 24-hours daily for seven days per week.

Per the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis* prepared by Ganddini Group, Inc., the Project is expected to generate a total of approximately 905 total vehicular trips per day (453 vehicles inbound + 453 vehicles outbound), which includes 115 total truck trips per day (58 trucks inbound + 58 trucks outbound) (2).

1 The proposed building square footage utilized in this analysis is based on a previous site plan which assumed a slightly smaller building square footage. Nonetheless, the emissions analyzed in this report would not change and a less than significant impact is expected.

EXHIBIT 1-A: LOCATION MAP

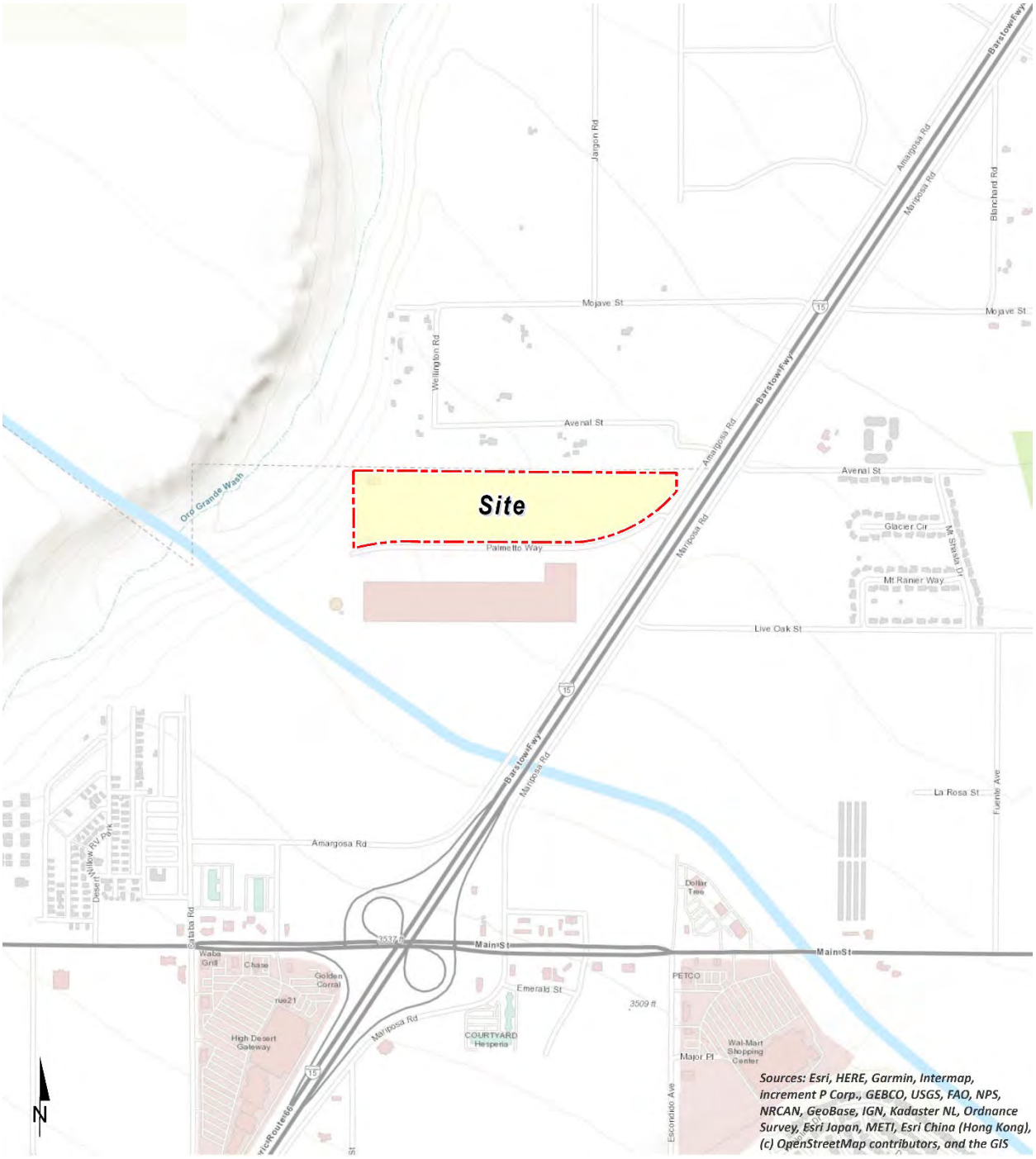
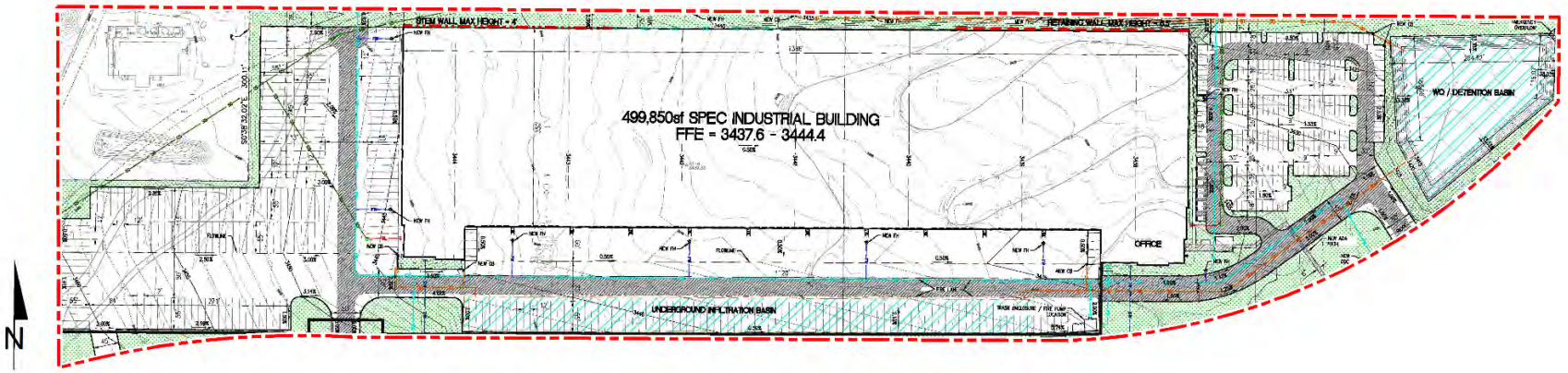


EXHIBIT 1-B: SITE PLAN



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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project region.

2.1 OVERVIEW

The most recent data for California's estimated total energy consumption and natural gas consumption is from 2019, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included (3):

- As of 2019, approximately 7,802 trillion British Thermal Unit (BTU) of energy was consumed
- As of 2019, approximately 662 million barrels of petroleum
- As of 2019, approximately 2,144 billion cubic feet of natural gas
- As of 2019, approximately 1 million short tons of coal

The California Energy Commission's (CEC) Transportation Energy Demand Forecast 2018-2030 was released in order to support the 2017 Integrated Energy Policy Report. The Transportation energy Demand Forecast 2018-2030 lays out graphs and data supporting their projections of California's future transportation energy demand. The projected inputs consider expected variable changes in fuel prices, income, population, and other variables. Predictions regarding fuel demand included:

- Gasoline demand in the transportation sector is expected to decline from approximately 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030 (4)
- Diesel demand in the transportation sector is expected to rise, increasing from approximately 3.7 billion diesel gallons in 2015 to approximately 4.7 billion in 2030 (4)
- Data from the Department of Energy states that approximately 3.9 billion gallons of diesel fuel were consumed in 2019 (5)

The most recent data provided by the EIA for energy use in California by demand sector is from 2018 and is reported as follows:

- Approximately 39.3% transportation
- Approximately 23.2% industrial
- Approximately 18.7% residential
- Approximately 18.9% commercial (6)

In 2020, total system electric generation for California was 272,576 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 190,913 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (15%) and the U.S. Southwest (15%) (7). Natural gas is the main source for electricity generation at 42.97% of the total in-state electric generation system power as shown in Table 2-1.

TABLE 2-1: TOTAL ELECRICITY SYSTEM POWER (CALIFORNIA 2020)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	Total California Energy Mix	Total California Power Mix
Coal	317	0.17%	194	6,963	7,157	8.76%	7,474	2.74%
Natural Gas	92,298	48.35%	70	8,654	8,724	10.68%	101,022	37.06%
Oil	30	0.02%	-	-	0	0.00%	30	0.01%
Other (Waste Heat/Petroleum Coke)	384	0.20%	125	9	134	0.16%	518	0.19%
Nuclear	16,280	8.53%	672	8,481	9,154	11.21%	25,434	9.33%
Large Hydro	17,938	9.40%	14,078	1,259	15,337	18.78%	33,275	12.21%
Unspecified	-	0.00%	12,870	1,745	14,615	17.90%	14,615	5.36%
Non-Renewable and Unspecified Totals	127,248	66.65%	28,009	27,111	55,120	67.50%	182,368	66.91%
Biomass	5,680	2.97%	975	25	1,000	1.22%	6,679	2.45%
Geothermal	11,345	5.94%	166	1,825	1,991	2.44%	13,336	4.89%
Small Hydro	3,476	1.82%	320	2	322	0.39%	3,798	1.39%
Solar	29,456	15.43%	284	6,312	6,596	8.08%	36,052	13.23%
Wind	13,708	7.18%	11,438	5,197	16,635	20.37%	30,343	11.13%
Renewable Totals	63,665	33.35%	13,184	13,359	26,543	32.50%	90,208	33.09%
System Totals	***190,913***	***100.00%***	***41,193***	***40,471***	***81,663***	***100.00%***	***272,576***	***100.00%***

Source: California Energy Commission's 2020 Total System Electric Generation

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below (8):

- California was the seventh-largest producer of crude oil among the 50 states in 2019, and, as of January 2020, it ranked third in oil refining capacity. Foreign suppliers, led by Saudi Arabia, Iraq, Ecuador, and Colombia, provided more than half of the crude oil refined in California in 2019.
- California is the largest consumer of both jet fuel and motor gasoline among the 50 states and accounted for 17% of the nation's jet fuel consumption and 11% of motor gasoline consumption in 2019. The state is the second-largest consumer of all petroleum products combined, accounting for 10% of the U.S. total. In 2018, California's energy consumption was the second highest among the states, but its per capita energy consumption was the fourth-lowest due in part to its mild climate and its energy efficiency programs.
- In 2019, California was the nation's top producer of electricity from solar, geothermal, and biomass energy and the state was second in the nation in conventional hydroelectric power generation.
- In 2019, California was the fourth largest electricity producer in the nation, but the state was also the nation's largest importer of electricity and received about 28% of its electricity supply from generating facilities outside of California, including imports from Mexico.

As indicated above, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

2.2 ELECTRICITY

The usage associated with electricity use were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1. The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies revealed the extent to which the South California Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts (9). Similarly, the subsequent 2021 IEPR's identify broad strategies that are aimed at maintaining electricity system reliability.

Electricity is currently provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and in 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2018 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers (10).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator (ISO) is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (11).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Tables 2-2 identifies SCE's specific proportional shares of electricity sources in 2020. As indicated in Table 2-2, the 2020 SCE Power Mix has renewable energy at 30.9% of the overall energy resources. Geothermal resources are at 5.5%, wind power is at 9.4%, large hydroelectric sources are at 3.3%, solar energy is at 15.1%, and coal is at 0% (12).

TABLE 2-2: SCE 2020 POWER CONTENT MIX

Energy Resources	2020 SCE Power Mix
Eligible Renewable	**30.9%**
Biomass & Waste	0.1%
Geothermal	5.5%
Eligible Hydroelectric	0.8%
Solar	15.1%
Wind	9.4%
Coal	**0.0%**
Large Hydroelectric	**3.3%**
Natural Gas	**15.2%**
Nuclear	**8.4%**
Other	**0.3%**
Unspecified Sources of power*	42.0%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.*
>
> *The overwhelming majority of natural gas utility customers in California are residential and small commercials customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.*

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area.) Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipelines systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet

California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A

certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California." (13)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California (14), and those vehicles consume an estimated 17.2 billion gallons of fuel each year[2]. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

[2] Fuel consumptions estimated utilizing information from EMFAC2021.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles (14). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 10% of the nation's total consumption. The state is the largest U.S. consumer of motor gasoline and jet fuel, and 85% of the petroleum consumed in California is used in the transportation sector (15).

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2019, about 37% of the natural gas delivered to consumers went to the state's industrial sector, and about 28% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the state's utility-scale electricity generation in 2019. The residential sector, where two-thirds of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1% (15).

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

3.1 FEDERAL REGULATIONS

3.1.1 INTERMODAL SURFACE TRANSPORTATION EFFICIENCY ACT OF 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

3.1.2 THE TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

3.2 CALIFORNIA REGULATIONS

3.2.1 INTEGRATED ENERGY POLICY REPORT (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2021 IEPR was adopted February 22, 2022, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2021 IEPR provides

the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the state is to meet its climate, energy, air quality, and other environmental goals while maintaining reliability and controlling costs. (16)

3.2.2 STATE OF CALIFORNIA ENERGY PLAN

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

3.2.3 CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. The most recent update to the California Energy Code was a on August 11, 2021. Buildings whose permit applications are submitted after January 1, 2023 must comply with the 2022 Energy Code.

TITLE 24 CCR PART 11 – CALIFORNIA GREEN BUILDING STANDARDS CODE

CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission. The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (17).

3.2.4 AB 1493 PAVLEY REGULATIONS AND FUEL EFFICIENCY STANDARDS

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

3.2.5 CALIFORNIA'S RENEWABLE PORTFOLIO STANDARD (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020 (18).

3.2.6 CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

3.2.7 100 PERCENT CLEAN ENERGY ACT OF 2018 (SB 100)

In September 2018, the legislature approved, and the Governor signed SB 100, which builds on the targets established in SB 1078 and SB 350. Most notably, SB 100 sets a goal of powering all retail electricity sold in California with renewable and zero-carbon resources. Additionally, SB 100 updates the interim renewables target from 50% to 60% by 2030.

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

The Project proposes conventional development types, reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other similar projects of like scale and configuration.

4.1 EVALUATION CRITERIA

Per Appendix F of the *State CEQA Guidelines* (19), states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
- Increasing reliance on renewable energy sources.

In compliance with Appendix G of the *State CEQA Guidelines* (20), this report analyzes the project's anticipated energy use during construction and operations to determine if the Project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

4.2 METHODOLOGY

Information from the CalEEMod Version 2022.1 outputs for the *Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis* (AQIA) (21) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands.

4.2.1 CALEEMOD

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of the CalEEMod Version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage. (22). Accordingly, the latest version of CalEEMod has been used to determine the Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendices 4.1 through 4.2.

4.2.2 EMISSION FACTORS MODEL

On May 2, 2022, the EPA approved the 2021 version of the EMissions FACtor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel

consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (23). This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of analysis, the 2024 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2021 model run is provided in Appendix 4.3.

4.3 CONSTRUCTION ENERGY DEMANDS

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the Project.

4.3.1 CONSTRUCTION POWER COST

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

CONSTRUCTION DURATION

Construction is expected to commence in January 2023 and will last through December 2023. Construction duration by phase is shown on Table 4-1. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[3] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*. The duration of construction activity was based on the 2024 opening year.

TABLE 4-1: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	1/15/2023	2/1/2023	13
Grading	2/1/2023	3/31/2023	43
Building Construction	3/15/2023	11/30/2023	187
Paving	11/15/2023	12/30/2023	33
Architectural Coating	11/6/2023	12/30/2023	40

[3] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3"OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

PROJECT CONSTRUCTION POWER COST

The *2022 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of $2.41, which was used to calculate the Project's total construction power cost (24).

As shown on Table 4-2, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately $35,245.60.

TABLE 4-2: CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 SF)	Size (1,000 SF)	Construction Duration (months)	Project Construction Power Cost
High-Cube Fulfillment Center	$2.41	499.700	11	$13,247.05
Parking Lot	$2.41	171.092	11	$4,535.65
Other Asphalt Surfaces	$2.41	658.729	11	$17,462.91
			CONSTRUCTION POWER COST	***$35,245.60***

4.3.2 CONSTRUCTION ELECTRICITY USAGE

The total Project construction electricity usage is the summation of the products of the power cost (estimated in Table 4-2) by the utility provider cost per kilowatt hour (kWh) of electricity.

PROJECT CONSTRUCTION ELECTRICITY USAGE

The SCE's general service rate schedule were used to determine the Project's electrical usage. As of January 1, 2022, SCE's general service rate is $0.13 per kilowatt hours (kWh) of electricity for industrial services (25). As shown on Table 4-3, the total electricity usage from on-site Project construction related activities is estimated to be approximately 267,580 kWh.

TABLE 4-3: CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
High-Cube Fulfillment Center	$0.13	100,570
Parking Lot	$0.13	34,434
Other Asphalt Surfaces	$0.13	132,576
	CONSTRUCTION ELECTRICITY USAGE	***267,580***

4.3.3 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 4-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code. It should be noted that most pieces of equipment would likely operate for fewer hours per day. A summary of construction equipment assumptions by phase is provided at Table 4-4.

TABLE 4-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Number	Hours Per Day
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

PROJECT CONSTRUCTION EQUIPMENT FUEL CONSUMPTION

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (26). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region[4]. As presented in Table 4-5, Project

[4] Based on Appendix A of the CalEEMod User's Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

construction activities would consume an estimated 41,845 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Activity/Duration	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Site Preparation	13	Rubber Tired Dozers	367	3	8	0.4	3,523	2,476
		Crawler Tractors	87	4	8	0.43	1,197	841
Grading	43	Excavators	36	2	8	0.38	219	509
		Graders	148	1	8	0.41	485	1,128
		Rubber Tired Dozers	367	1	8	0.4	1,174	2,730
		Scrapers	423	2	8	0.48	3,249	7,551
		Crawler Tractors	87	2	8	0.43	599	1,391
Building Construction	187	Cranes	367	1	8	0.29	851	8,606
		Forklifts	82	3	8	0.2	394	3,979
		Generator Sets	14	1	8	0.74	83	838
Paving	33	Tractors/Loaders/Backhoes	84	3	8	0.37	746	7,540
		Welders	46	1	8	0.45	166	1,674
		Pavers	81	2	8	0.42	544	971
Architectural Coating	40	Air Compressors	37	1	8	0.48	142	307
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)								***58,207***

4.3.3 CONSTRUCTION TRIPS AND VMT

Construction generates on-road vehicle emissions from vehicle usage for workers, hauling, and vendors commuting to and from the site. The number of workers, hauling, and vendor trips are presented below in Table 4-6. It should be noted that for Vendor Trips, specifically, CalEEMod only assigns Vendor Trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for Vendor Trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 4-6: CONSTRUCTION TRIPS AND VMT

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	4	0
Grading	20	15	1
Building Construction	210	63	0
Paving	15	0	0
Architectural Coating	42	0	0

4.3.4 CONSTRUCTION WORKER FUEL ESTIMATES

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 792,022 VMT during the 1 months of construction (21). Based on CalEEMod methodology, it is assumed that 50% of all vendor trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1[5]), and 25% are from light-duty-trucks (LDT2[6]). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (23). EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the San Bernardino Mojave Desert sub-area for the 2023 calendar year. Data from EMFAC2021 is shown in Appendix 4.3.

Table 4-7 provides an estimated annual fuel consumption resulting from Project construction worker trips. Based on Table 4-7, it is estimated that 29,890 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

[5] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[6] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 4-7: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (Days)	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
2023	**LDA**						
	Site Preparation	13	9	18.5	2,165	30.29	71
	Grading	43	10	18.5	7,955	30.29	263
	Building Construction	187	105	18.5	363,248	30.29	11,993
	Paving	33	8	18.5	4,884	30.29	161
	Architectural Coating	40	21	18.5	15,540	30.29	513
	LDT1						
	Site Preparation	13	5	18.5	1,203	23.75	51
	Grading	43	5	18.5	3,978	23.75	167
	Building Construction	187	53	18.5	183,354	23.75	7,720
	Paving	33	4	18.5	2,442	23.75	103
	Architectural Coating	40	11	18.5	8,140	23.75	343
	LDT2						
	Site Preparation	13	5	18.5	1,203	23.41	51
	Grading	43	5	18.5	3,978	23.41	170
	Building Construction	187	53	18.5	183,354	23.41	7,831
	Paving	33	4	18.5	2,442	23.41	104
	Architectural Coating	40	11	18.5	8,140	23.41	348
	Paving	55	15	10.8	8,910	27.48	324
	Architectural Coating	55	173	10.8	102,762	27.48	3,739
Total Construction Worker Fuel Consumption							***29,890***

It should be noted that construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

4.3.5 CONSTRUCTION VENDOR/HAULING FUEL ESTIMATES

With respect to estimated VMT, the construction vendor and hauling trips (vehicles that deliver materials to the site during construction) would generate an estimated 131,342 VMT along area roadways for the Project over the duration of construction activity (21). It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHDT), 50% of vendor trips are from heavy-heavy duty trucks (HHDT), and 100% of all hauling trips are from HHDTs. These

assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA (21). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHDT and HHDT vehicle classes within the San Bernardino Mojave Desert sub-area for the 2023 calendar year. Data from EMFAC2021 is shown in Appendix 4.3.

Based on Table 4-8, it is estimated that 19,718 gallons of fuel will be consumed related to construction vendor trips during full construction of the Project.

TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES

Year	Construction Activity	Duration (days)	Vendor/Hauling Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel
2023	**MHDT**						
	Site Preparation	13	2	10.2	265	7.37	36
	Grading	43	8	10.2	3,509	7.37	476
	Building Construction	187	32	10.2	61,037	7.37	8,281
	HHDT (Vendor)						
	Site Preparation	13	2	10.2	265	6.09	44
	Grading	43	8	10.2	3,509	6.09	576
	Building Construction	187	32	10.2	61,037	6.09	10,022
	HHDT (Hauling)						
	Grading	43	2	20	1,720	6.09	282
TOTAL VENDOR/HAULING FUEL CONSUMPTION							***19,718***

It should be noted that Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

4.3.6 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

Starting in 2014, CARB adopted the nation's first regulation aimed at cleaning up off-road construction equipment such as bulldozers, graders, and backhoes. These requirements ensure fleets gradually turnover the oldest and dirtiest equipment to newer, cleaner models and prevent fleets from adding older, dirtier equipment. As such, the equipment used for Project construction would conform to CARB regulations and California emissions standards. It should also be noted that there are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

Construction contractors would be required to comply with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additional construction-source energy efficiencies would occur due to required California regulations and best available control measures (BACM). For example, CCR Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Section 2449(d)(3) requires that grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling." In this manner, construction equipment operators are required to be informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing, and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by passenger car and truck vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 TRANSPORTATION ENERGY DEMANDS

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site. The VMT per vehicle class can be determined by evaluated in the vehicle fleet mix and the total VMT.

As with worker and vendors trips, operational vehicle fuel efficiencies were estimated using information generated within EMFAC2021 developed by CARB (23). EMFAC2021 was run for the San Bernardino Mojave Desert sub-area for the 2024 calendar year. Data from EMFAC2021 is shown in Appendix 4.3.

As summarized on Table 4-9 the Project will result in 5,558,434 annual VMT and an estimated annual fuel consumption of 320,534 gallons of fuel.

TABLE 4-9: TOTAL PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION

Vehicle Type	Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
LDA	31.22	2,357,829	75,524
LDT1	24.20	222,260	9,184
LDT2	24.10	993,089	41,212
MDV	19.43	767,959	39,531
MCY	40.86	128,833	3,153
LHDT1	15.69	141,866	9,040
LHDT2	15.24	37,967	2,491
MHDT	7.48	227,158	30,381
HHDT	6.19	681,473	110,016
TOTAL (ALL VEHICLES)	***5,558,434***		***320,534***

4.4.2 FACILITY ENERGY DEMANDS

Project building operations activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied to the Project by SCE. Annual natural gas and electricity demands of the Project are summarized in Table 4-10 and provided in Appendix 4.2.

TABLE 4-10: PROJECT ANNUAL OPERATIONAL NATURAL GAS DEMAND SUMMARY

Land Use	Natural Gas Demand (kBTU/year)	Electricity Demand (kWh/year)
High-Cube Fulfillment Center	9,499,636	2,307,966
Parking Lot	0.00	149,963
TOTAL PROJECT ENERGY DEMAND	***9,499,636***	***2,457,929***

kBTU – kilo-British Thermal Units

4.4.3 OPERATIONAL ENERGY EFFICIENCY/CONSERVATION MEASURES

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and

vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title24, California Green Building Standards Code).

ENHANCED VEHICLE FUEL EFFICIENCIES

Project annual fuel consumption estimates presented previously in Table 4-9 represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands.

The Property Owner/Developer would comply with the City's transportation demand management ordinance (see Chapter 10.24 of the Development Code).

4.5 SUMMARY

4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately $35,245.60. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 267,580 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 41,845 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 29,890 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDTs and HHDTs) will total approximately 19,718 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction

materials. The 2021 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (27). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 OPERATIONAL ENERGY DEMANDS

TRANSPORTATION ENERGY DEMANDS

Annual vehicular trips and related VMT generated by the operation of the Project would result in a fuel demand of 320,534 gallons of fuel.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and configuration, as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Ed., 2021); and CalEEMod. As such, Project operations would not result in excessive and wasteful vehicle trips and VMT, nor excess and wasteful vehicle energy consumption compared to other industrial uses.

It should be noted that the state strategy for the transportation sector for medium and heavy-duty trucks is focused on making trucks more efficient and expediting truck turnover rather than reducing VMT from trucks. This is in contrast to the passenger vehicle component of the transportation sector where both per-capita VMT reductions and an increase in vehicle efficiency are forecasted to be needed to achieve the overall state emissions reductions goals.

Heavy duty trucks involved in goods movements are generally controlled on the technology side and through fleet turnover of older trucks and engines to newer and cleaner trucks and engines. The first battery-electric heavy-heavy duty trucks are being tested this year and SCAQMD is looking to integrate this new technology into large-scale truck operations. The following state strategies reduce GHG emissions from the medium and heavy-duty trucks:

- CARB's Mobile Source Strategy focuses on reducing GHGs through the transition to zero and low emission vehicles and from medium-duty and heavy-duty trucks.
- CARB's Sustainable Freight Action Plan establishes a goal to improve freight efficiency by 25 percent by 2030, deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.
- CARB's Emissions Reduction Plan for Ports and Goods Movement (Goods Movement Plan) in California focuses on reducing heavy-duty truck-related emissions focus on establishment of emissions standards for trucks, fleet turnover, truck retrofits, and restriction on truck idling (CARB 2006). While the focus of Goods Movement Plan is to reduce criteria air pollutant and air toxic emissions, the strategies to reduce these pollutants would also generally have a beneficial effect in reducing GHG emissions.
- CARB's On-Road Truck and Bus Regulation (2010) requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter filter requirements beginning January 1, 2012. Lighter and older heavier trucks

must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent (28).

- CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated GHG emissions.

The Project would implement project design features that would facilitate the accessibility, parking, and loading of trucks on site.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. Facilitating pedestrian and bicycle access would reduce VMT and associated energy consumption. In compliance with the California Green Building Standards Code and City requirements, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

FACILITY ENERGY DEMANDS

Project facility operational energy demands are estimated at 9,499,636 kBTU/year of natural gas and 2,457,929 kWh/year of electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied by SCE. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. The Project does not propose uses that are inherently energy intensive and the energy demands in total would be comparable to other industrial uses of similar scale and configuration.

Lastly, the Project will comply with the applicable Title 24 standards. Compliance itself with applicable Title 24 standards will ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSIONS

5.1 ENERGY IMPACT 1

Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

As supported by the preceding analyses, Project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy, and potential Project impacts in these regards would be less-than-significant. Further, energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy-producing or energy transmission facilities. The Project would not create or otherwise result in a potentially significant impact affecting energy resources or energy delivery systems.

5.2 ENERGY IMPACT 2

Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The Project's consistency with the applicable state and local plans is discussed below.

CONSISTENCY WITH ISTEA

Transportation and access to the Project site is provided by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site.

CONSISTENCY WITH TEA-21

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.

CONSISTENCY WITH IEPR

Electricity would be provided to the Project by SCE. SCE's *Clean Power and Electrification Pathway* (CPEP) white paper builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2021 IEPR.

Additionally, the Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary. As such, development of the Project would support the goals presented in the 2021 IEPR.

CONSISTENCY WITH STATE OF CALIFORNIA ENERGY PLAN

The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and takes advantage of existing infrastructure systems. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 6, ENERGY EFFICIENCY STANDARDS

The 2022 version of Title 24 was adopted by the CEC and will become effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. Therefore, the Project would not result in a significant impact on energy resources (29). The proposed Project would be subject to Title 24 standards.

CONSISTENCY WITH CALIFORNIA CODE TITLE 24, PART 11, CALGREEN

As previously stated, CCR, Title 24, Part 11: CALGreen is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2009, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards which will become effective January 1, 2023. The proposed Project would be required to comply with the applicable standards in place at the time building permit document submittals are made.

CONSISTENCY WITH AB 1493

AB 1493 is not applicable to the Project as it is a statewide measure establishing vehicle emissions standards. No feature of the Project would interfere with implementation of the requirements under AB 1493.

CONSISTENCY WITH RPS

California's RPS is not applicable to the Project as it is a statewide measure that establishes a renewable energy mix. No feature of the Project would interfere with implementation of the requirements under RPS.

CONSISTENCY WITH SB 350 AND SB 100

The Project would use energy from SCE, which have committed to diversify their portfolio of energy sources by increasing energy from wind and solar sources. No feature of the Project would interfere with implementation of SB 350 and SB 100. Additionally, the Project would be designed and constructed to implement the energy efficiency measures for new industrial developments and would include several measures designed to reduce energy consumption.

As shown above, the Project would not conflict with any of the state or local plans. As such, a less than significant impact is expected.

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7 CERTIFICATIONS

The contents of this energy analysis report represent an accurate depiction of the environmental impacts associated with the proposed Amargosa and Palmetto High-Cube Warehouse. The information contained in this energy analysis report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

Haseeb Qureshi
Principal
Urban Crossroads, Inc.
hqureshi@urbanxroads.com

EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 4.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial (Construction) Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Construction)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.83	4.90	47.0	38.0	0.05	2.53	—	2.53	2.33	—	2.33	—	5,530	5,530	0.22	0.04	—	5,549
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.67	1.35	< 0.005	0.09	—	0.09	0.08	—	0.08	—	197	197	0.01	< 0.005	—	198
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	32.6	32.6	< 0.005	< 0.005	—	32.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.12	1.15	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	235	235	0.01	0.01	0.03	238
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	132	132	< 0.005	0.02	0.01	137
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	8.63	8.63	< 0.005	< 0.005	0.02	8.75

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.70	4.70	< 0.005	< 0.005	0.01	4.90
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.82	3.85	0.01	0.23	—	0.23	0.21	—	0.21	—	791	791	0.03	0.01	—	794

Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.88	0.70	< 0.005	0.04	—	0.04	0.04	—	0.04	—	131	131	0.01	< 0.005	—	131
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.32	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	269	269	0.01	0.01	0.03	272
Vendor	0.02	0.02	0.56	0.26	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	495	495	< 0.005	0.07	0.03	515
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	62.7	62.7	< 0.005	0.01	< 0.005	65.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.17	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	32.6	32.6	< 0.005	< 0.005	0.06	33.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	58.3	58.3	< 0.005	0.01	0.07	60.7
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.38	7.38	< 0.005	< 0.005	0.01	7.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	5.40	5.40	< 0.005	< 0.005	0.01	5.48
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.65	9.65	< 0.005	< 0.005	0.01	10.1

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.5. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.56	7.32	0.01	0.31	—	0.31	0.28	—	0.28	—	1,347	1,347	0.05	0.01	—	1,352
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.20	1.34	< 0.005	0.06	—	0.06	0.05	—	0.05	—	223	223	0.01	< 0.005	—	224
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.46	1.27	1.30	20.6	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	3,193	3,193	0.13	0.10	13.5	3,240
Vendor	0.10	0.08	2.23	1.07	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,078	2,078	< 0.005	0.28	5.51	2,168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.23	1.12	1.39	13.8	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	2,823	2,823	0.14	0.10	0.35	2,858
Vendor	0.10	0.07	2.36	1.09	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,080	2,080	< 0.005	0.28	0.14	2,165
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.58	0.76	7.93	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,490	1,490	0.07	0.05	2.97	1,510
Vendor	0.05	0.04	1.21	0.55	0.01	0.01	0.06	0.07	0.01	0.02	0.04	—	1,065	1,065	< 0.005	0.15	1.22	1,110
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.45	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	247	247	0.01	0.01	0.49	250
Vendor	0.01	0.01	0.22	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	176	176	< 0.005	0.02	0.20	184
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.91	< 0.005	0.04	—	0.04	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	0.99	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.10	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	18.8	18.8	< 0.005	< 0.005	0.04	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.11	3.11	< 0.005	< 0.005	0.01	3.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.25	1.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.14	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	19.5	19.5	< 0.005	< 0.005	—	19.6
Architectural Coatings	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.23	3.23	< 0.005	< 0.005	—	3.24
Architectural Coatings	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	2.77	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.03	0.02	0.07	572
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.34	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	63.7	63.7	< 0.005	< 0.005	0.13	64.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/15/2023	2/1/2023	5.00	13.0	—
Grading	Grading	2/1/2023	3/31/2023	5.00	43.0	—
Building Construction	Building Construction	3/15/2023	11/30/2023	5.00	187	—
Paving	Paving	11/15/2023	12/30/2023	5.00	33.0	—
Architectural Coating	Architectural Coating	11/6/2023	12/30/2023	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	15.0	10.2	HHDT,MHDT

Grading	Hauling	0.88	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	210	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	63.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	42.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	786,896	262,299	49,795

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5	0.00	—
Grading	300	—	172	0.00	—
Paving	0.00	0.00	0.00	0.00	19.1

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	3.93	100%
Other Non-Asphalt Surfaces	15.1	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8
Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9

Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—

2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0

Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

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APPENDIX 4.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial (Operations) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Operations)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—
User Defined Industrial	500	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	27,622	28,096	49.0	2.32	72.7	30,086
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	26,308	26,782	49.0	2.34	1.89	28,706
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	23,582	24,056	48.9	2.09	26.7	25,929
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	3,904	3,983	8.10	0.35	4.43	4,293

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.20	4.67	13.6	62.0	0.21	0.25	5.30	5.55	0.24	0.99	1.22	—	21,482	21,482	0.43	1.73	72.7	22,082
Area	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	27,622	28,096	49.0	2.32	72.7	30,086
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.80	4.27	14.6	46.7	0.20	0.25	5.30	5.55	0.24	0.99	1.22	—	20,257	20,257	0.44	1.76	1.89	20,794
Area	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	26,308	26,782	49.0	2.34	1.89	28,706
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13	3.67	12.6	43.3	0.17	0.21	4.52	4.73	0.20	0.84	1.04	—	17,487	17,487	0.38	1.50	26.7	17,972
Area	1.90	13.2	0.09	10.7	< 0.005	0.01	—	0.01	0.02	—	0.02	—	44.1	44.1	< 0.005	< 0.005	—	45.4
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	23,582	24,056	48.9	2.09	26.7	25,929
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.75	0.67	2.30	7.90	0.03	0.04	0.82	0.86	0.04	0.15	0.19	—	2,895	2,895	0.06	0.25	4.43	2,975

Area	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Energy	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	893	893	0.08	0.01	—	896
Water	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Total	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	3,904	3,983	8.10	0.35	4.43	4,293

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.83	4.36	3.01	58.6	0.11	0.05	0.44	0.49	0.04	0.13	0.17	—	11,178	11,178	0.40	0.28	43.2	11,313
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.37	0.31	10.6	3.40	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,304	10,304	0.03	1.46	29.5	10,769
Total	5.20	4.67	13.6	62.0	0.21	0.25	1.16	1.41	0.24	0.36	0.60	—	21,482	21,482	0.43	1.73	72.7	22,082

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.45	3.98	3.35	43.3	0.10	0.05	0.44	0.49	0.04	0.13	0.17	—	9,948	9,948	0.41	0.30	1.12	10,048
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.35	0.29	11.2	3.41	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,309	10,309	0.03	1.46	0.77	10,746
Total	4.80	4.27	14.6	46.7	0.20	0.25	1.16	1.41	0.24	0.36	0.60	—	20,257	20,257	0.44	1.76	1.89	20,794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.70	0.62	0.55	7.38	0.02	0.01	0.07	0.08	0.01	0.02	0.03	—	1,442	1,442	0.06	0.04	2.63	1,459
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.06	0.05	1.76	0.52	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	1,453	1,453	< 0.005	0.21	1.80	1,516
Total	0.75	0.67	2.30	7.90	0.03	0.04	0.18	0.22	0.04	0.06	0.09	—	2,895	2,895	0.06	0.25	4.43	2,975

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,205	2,205	0.21	0.03	—	2,217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,348	2,348	0.22	0.03	—	2,361
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,205	2,205	0.21	0.03	—	2,217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,348	2,348	0.22	0.03	—	2,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.03	< 0.005	—	367
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	23.7	23.7	< 0.005	< 0.005	—	23.9
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	389	389	0.04	< 0.005	—	391

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86	3.56	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Total	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.35	0.32	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Total	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790	391	369	245,576	14,380	7,113	6,713	4,469,970
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	115	57.0	53.5	35,722	3,502	1,736	1,629	1,088,464

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	786,896	262,299	49,795

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,307,966	349	0.0330	0.0040	9,499,636
Parking Lot	149,963	349	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,555,625	5,645,327
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	470	0.00
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit

Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8

Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—

Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9

Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—

Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule

Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Dust From Material Movement	Ex
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle
Operations: Refrigerants	Unrefrigerated warehouse modeled with no refrigerant emissions

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APPENDIX 4.3:

EMFAC2021

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (MD)
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calen	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	Fuel Consumption	Fuel_Consumption (gal)	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (MD)	2023	HHDT	Aggregate	Aggregate	Gasoline	3.706020688	198.5497848	0.05580807	55.80807012	429094.7266	198.5497848	2613238.336	6.09	HHDT
San Bernardino (MD)	2023	HHDT	Aggregate	Aggregate	Diesel	12541.2239	2609489.247	428.631287	428631.287		2609489.247			
San Bernardino (MD)	2023	HHDT	Aggregate	Aggregate	Electricity	11.53583972	1130.876004	0	0		1130.876004			
San Bernardino (MD)	2023	HHDT	Aggregate	Aggregate	Natural Gas	33.1907971	2419.663613	0.407631558	407.6315577		2419.663613			
San Bernardino (MD)	2023	LDA	Aggregate	Aggregate	Gasoline	312180.2726	12850025.9	448.5592007	448559.2007	455321.7978	12850025.9	13790681.2	30.29	LDA
San Bernardino (MD)	2023	LDA	Aggregate	Aggregate	Diesel	1111.779846	36864.07043	0.899996768	899.9967678		36864.07043			
San Bernardino (MD)	2023	LDA	Aggregate	Aggregate	Electricity	11324.98946	536054.6226	0	0		536054.6226			
San Bernardino (MD)	2023	LDA	Aggregate	Aggregate	Plug-in Hybr	7422.455377	367736.6077	5.862600371	5862.600371		367736.6077			
San Bernardino (MD)	2023	LDT1	Aggregate	Aggregate	Gasoline	32278.55095	1068871.467	45.10188563	45101.88563	45129.3869	1068871.467	1071843.523	23.75	LDT1
San Bernardino (MD)	2023	LDT1	Aggregate	Aggregate	Diesel	17.7719872	243.4069851	0.010382367	10.38236679		243.4069851			
San Bernardino (MD)	2023	LDT1	Aggregate	Aggregate	Electricity	37.46099309	1553.818678	0	0		1553.818678			
San Bernardino (MD)	2023	LDT1	Aggregate	Aggregate	Plug-in Hybr	21.98847633	1174.830471	0.017118907	17.11890704		1174.830471			
San Bernardino (MD)	2023	LDT2	Aggregate	Aggregate	Gasoline	135449.7785	5476170.679	236.1411805	236141.1805	237379.2465	5476170.679	5557754.986	23.41	LDT2
San Bernardino (MD)	2023	LDT2	Aggregate	Aggregate	Diesel	415.1711158	18119.07266	0.578110582	578.1105817		18119.07266			
San Bernardino (MD)	2023	LDT2	Aggregate	Aggregate	Electricity	534.2570507	20036.79258	0	0		20036.79258			
San Bernardino (MD)	2023	LDT2	Aggregate	Aggregate	Plug-in Hybr	841.1395529	43428.44096	0.659955358	659.9553577		43428.44096			
San Bernardino (MD)	2023	LHDT1	Aggregate	Aggregate	Gasoline	13373.18195	482494.3403	38.02966063	38029.66063	58441.51975	482494.3403	897451.7074	15.36	LHDT1
San Bernardino (MD)	2023	LHDT1	Aggregate	Aggregate	Diesel	11266.77185	414957.3672	20.41185912	20411.85912		414957.3672			
San Bernardino (MD)	2023	LHDT2	Aggregate	Aggregate	Gasoline	1757.472296	63304.89683	5.541732627	5541.732627	16323.74543	63304.89683	245227.1248	15.02	LHDT2
San Bernardino (MD)	2023	LHDT2	Aggregate	Aggregate	Diesel	4751.018174	181922.228	10.78201281	10782.01281		181922.228			
San Bernardino (MD)	2023	MCY	Aggregate	Aggregate	Gasoline	18296.66506	105592.6229	2.599049491	2599.049491	2599.049491	105592.6229	105592.6229	40.63	MCY
San Bernardino (MD)	2023	MDV	Aggregate	Aggregate	Gasoline	106014.0905	4096216.013	219.1155882	219115.5882	222623.2901	4096216.013	4215059.816	18.93	MDV
San Bernardino (MD)	2023	MDV	Aggregate	Aggregate	Diesel	1733.718228	70442.83229	3.080871724	3080.871724		70442.83229			
San Bernardino (MD)	2023	MDV	Aggregate	Aggregate	Electricity	582.245085	21819.8923	0	0		21819.8923			
San Bernardino (MD)	2023	MDV	Aggregate	Aggregate	Plug-in Hybr	554.32769	26581.07894	0.42683018	426.8301803		26581.07894			
San Bernardino (MD)	2023	MH	Aggregate	Aggregate	Gasoline	3314.159385	28525.30478	5.986739837	5986.739837	7057.640687	28525.30478	39737.73873	5.63	MH
San Bernardino (MD)	2023	MH	Aggregate	Aggregate	Diesel	1297.87851	11212.43395	1.070900849	1070.900849		11212.43395			
San Bernardino (MD)	2023	MHDT	Aggregate	Aggregate	Gasoline	920.2847184	63606.39039	12.56685824	12566.85824	29969.89352	63606.39039	220886.5569	7.37	MHDT
San Bernardino (MD)	2023	MHDT	Aggregate	Aggregate	Diesel	2658.087983	156869.8925	17.3625782	17362.5782		156869.8925			
San Bernardino (MD)	2023	MHDT	Aggregate	Aggregate	Electricity	1.582673807	49.9804468	0	0		49.9804468			
San Bernardino (MD)	2023	MHDT	Aggregate	Aggregate	Natural Gas	7.663495521	360.2936086	0.040457078	40.45707772		360.2936086			
San Bernardino (MD)	2023	OBUS	Aggregate	Aggregate	Gasoline	281.3228219	17086.93238	3.443318417	3443.318417	4122.346324	17086.93238	22050.43546	5.35	OBUS
San Bernardino (MD)	2023	OBUS	Aggregate	Aggregate	Diesel	71.62191097	4963.503081	0.679027908	679.0279076		4963.503081			
San Bernardino (MD)	2023	SBUS	Aggregate	Aggregate	Gasoline	93.76777841	5830.784163	0.637465093	637.4650932		5830.784163			
San Bernardino (MD)	2023	SBUS	Aggregate	Aggregate	Diesel	620.8980814	14679.01532	1.941851204	1941.851204	2579.316297	14679.01532	20512.94447	7.95	SBUS
San Bernardino (MD)	2023	SBUS	Aggregate	Aggregate	Electricity	0.270902054	3.144981365	0	0		3.144981365			
San Bernardino (MD)	2023	UBUS	Aggregate	Aggregate	Gasoline	55.06244647	5254.364757	1.388409085	1388.409085		5254.364757			
San Bernardino (MD)	2023	UBUS	Aggregate	Aggregate	Diesel	2.558566388	252.3863908	0.031795366	31.79536623		252.3863908			
San Bernardino (MD)	2023	UBUS	Aggregate	Aggregate	Electricity	0.196662013	20.74124617	0	0	4878.358	20.74124617	19220.95553	3.94	UBUS
San Bernardino (MD)	2023	UBUS	Aggregate	Aggregate	Natural Gas	103.6567732	13693.46313	3.458153548	3458.153548		13693.46313			

Source: EMFAC2021 (v1.0.2) Emissions Inventory
Region Type: Sub-Area
Region: San Bernardino (MD)
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calen	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	Fuel Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Gasoline	2.67371537	179.0665221	0.047227051	47.22705145	431524.1776	179.0665221	2672982.086	6.19	HHDT
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Diesel	12941.95694	2664602.465	431.0654074	431065.4074		2664602.465			
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Electricity	35.13402513	5737.248237	0	0		5737.248237			
San Bernardino (MD)	2024	HHDT	Aggregate	Aggregate	Natural Gas	34.45532984	2463.306139	0.411543149	411.5431489		2463.306139			
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Gasoline	309548.7892	12857053.58	440.1966248	440196.6248	447331.193	12857053.58	13965428.57	31.22	LDA
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Diesel	1034.982141	34051.71651	0.824103926	824.103926		34051.71651			
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Electricity	13623.83126	668545.7008	0	0		668545.7008			
San Bernardino (MD)	2024	LDA	Aggregate	Aggregate	Plug-in Hybr	8183.169851	405777.5733	6.310464316	6310.464316		405777.5733			
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Gasoline	31233.77168	1048128.245	43.45105088	43451.05088	43486.19277	1048128.245	1052389.791	24.20	LDT1
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Diesel	15.99626011	215.2408333	0.009170376	9.170375651		215.2408333			
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Electricity	48.63773853	2207.053268	0	0		2207.053268			
San Bernardino (MD)	2024	LDT1	Aggregate	Aggregate	Plug-in Hybr	34.41015177	1839.251886	0.025971515	25.97151479		1839.251886			
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Gasoline	137725.5016	5643211.721	237.0500862	237050.0862	238447.9934	5643211.721	5745847.212	24.10	LDT2
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Diesel	435.2924741	19152.63273	0.59798519	597.9851905		19152.63273			
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Electricity	786.4209618	29403.79568	0	0		29403.79568			
San Bernardino (MD)	2024	LDT2	Aggregate	Aggregate	Plug-in Hybr	1052.1882	54079.0621	0.799922079	799.922079		54079.0621			
San Bernardino (MD)	2024	LHDT1	Aggregate	Aggregate	Gasoline	13065.12456	480544.6519	36.82043144	36820.43144	56877.26029	480544.6519	892607.9514	15.69	LHDT1
San Bernardino (MD)	2024	LHDT1	Aggregate	Aggregate	Diesel	11067.90041	409320.0985	20.05682885	20056.82885		409320.0985			
San Bernardino (MD)	2024	LHDT1	Aggregate	Aggregate	Electricity	35.57307835	2743.201006	0	0		2743.201006			
San Bernardino (MD)	2024	LHDT2	Aggregate	Aggregate	Gasoline	1727.120361	62917.63426	5.382965998	5382.965998	16041.7624	62917.63426	244483.5133	15.24	LHDT2
San Bernardino (MD)	2024	LHDT2	Aggregate	Aggregate	Diesel	4731.795472	180893.1491	10.6587964	10658.7964		180893.1491			
San Bernardino (MD)	2024	LHDT2	Aggregate	Aggregate	Electricity	9.20742508	672.7299431	0	0		672.7299431			
San Bernardino (MD)	2024	MCY	Aggregate	Aggregate	Gasoline	18161.87327	104842.2951	2.566095645	2566.095645	2566.095645	104842.2951	104842.2951	40.86	MCY
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Gasoline	104992.7033	4103194.432	214.6505054	214650.5054	218155.5699	4103194.432	4237999.5	19.43	MDV
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Diesel	1714.88073	69248.41239	2.991593915	2991.593915		69248.41239			
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Electricity	866.9961777	32393.89091	0	0		32393.89091			
San Bernardino (MD)	2024	MDV	Aggregate	Aggregate	Plug-in Hybr	687.4700368	33162.76439	0.513470573	513.470573		33162.76439			
San Bernardino (MD)	2024	MH	Aggregate	Aggregate	Gasoline	3091.371633	26724.2653	5.605041279	5605.041279	6656.655531	26724.2653	37736.37285	5.67	MH
San Bernardino (MD)	2024	MH	Aggregate	Aggregate	Diesel	1276.896684	11012.10756	1.051614251	1051.614251		11012.10756			
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Gasoline	898.6661288	63890.69959	12.44579031	12445.79031	30031.31509	63890.69959	224542.5252	7.48	MHDT
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Diesel	2714.454563	159428.8117	17.54186171	17541.86171		159428.8117			
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Electricity	10.1031131	832.4896331	0	0		832.4896331			
San Bernardino (MD)	2024	MHDT	Aggregate	Aggregate	Natural Gas	8.401730183	390.5243176	0.043663079	43.66307868		390.5243176			
San Bernardino (MD)	2024	OBUS	Aggregate	Aggregate	Gasoline	271.7824577	16376.9448	3.255024528	3255.024528	3935.151344	16376.9448	21439.92288	5.45	OBUS
San Bernardino (MD)	2024	OBUS	Aggregate	Aggregate	Diesel	72.39768455	4993.524222	0.680126817	680.1268166		4993.524222			
San Bernardino (MD)	2024	OBUS	Aggregate	Aggregate	Electricity	0.546180409	69.45385865	0	0		69.45385865			
San Bernardino (MD)	2024	SBUS	Aggregate	Aggregate	Gasoline	96.21442986	6087.08589	0.660941658	660.941658		6087.08589			
San Bernardino (MD)	2024	SBUS	Aggregate	Aggregate	Diesel	625.5915659	14655.09273	1.93386489	1933.86489	2594.806548	14655.09273	20791.50655	8.01	SBUS
San Bernardino (MD)	2024	SBUS	Aggregate	Aggregate	Electricity	1.465134098	49.32793183	0	0		49.32793183			
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Gasoline	55.17381074	5264.991755	1.390338076	1390.338076		5264.991755			
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Diesel	2.531039845	250.3343972	0.03157511	31.57511024		250.3343972			
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Electricity	0.196662013	20.74124617	0	0	4704.95373	20.74124617	19259.83007	4.09	UBUS
San Bernardino (MD)	2024	UBUS	Aggregate	Aggregate	Natural Gas	103.8995189	13723.76268	3.283040544	3283.040544		13723.76268			

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APPENDIX F
Geotechnical Investigation Proposed Warehouse

GEOTECHNICAL INVESTIGATION
PROPOSED WAREHOUSE

NWC Palmeto Way and Amargosa Road
Hesperia, California
for
Rachamin 5, LLC



SOUTHERN
CALIFORNIA
GEOTECHNICAL
A California Corporation

July 18, 2022

Rachamin 5, LLC
6001 East Slauson Avenue
Commerce, California 90040

Attention: Mr. Ramin Namvar

Project No.: **22G203-1**

Subject: **Geotechnical Investigation**
Proposed Warehouse
NWC Palmeto Way and Amargosa Road
Hesperia, California

Mr. Namvar:

In accordance with your request, we have conducted a geotechnical investigation at the subject site. We are pleased to present this report summarizing the conclusions and recommendations developed from our investigation.

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Joseph Lozano Leon
Project Engineer

Robert G. Trazo, M.Sc., GE 2655
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
ROBERT TRAZO
No. 2655
GEOTECHNICAL
STATE OF CALIFORNIA

Distribution: (1) Addressee

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1.0 EXECUTIVE SUMMARY

Presented below is a brief summary of the conclusions and recommendations of this investigation. Since this summary is not all inclusive, it should be read in complete context with the entire report.

Geotechnical Design Considerations

- Artificial fill soils were encountered at one of the boring locations, extending from the ground surface to a depth of 4½± feet. The fill soils possess varying strengths and densities, and are considered to represent undocumented fill. These soils, in their present condition, are not considered suitable for support of the foundation loads of the new structure.
- The fill soils are underlain by native alluvium which possesses varying strengths and densities. The results of laboratory testing indicate that the near-surface soils within the upper 5 to 6± feet possess a potential for moderate to severe collapse when exposed to moisture infiltration as well as moderate consolidation when exposed to load increases in the range of those that will be exerted by the new foundations.
- Remedial grading will be necessary to remove all of the undocumented fill soils in their entirety and the upper portion of the near-surface native alluvial soils, and replace these materials as compacted structural fill soils.

Site Preparation Recommendations

- Site stripping within vegetated areas should remove include all vegetation, including tree root masses and any organic topsoil.
- Remedial grading is recommended to be performed within the proposed building area in order to remove all of the undocumented fill soils in their entirety, and the upper portion of the near-surface native alluvial soils. The soils within the proposed building pad area should be overexcavated to a depth of 5 feet below existing grade and to a depth of at least 4 feet below proposed building pad subgrade elevations, whichever is greater.
- The depth of overexcavation should also be sufficient to remove any existing fill soils. The proposed foundation influence zones should be overexcavated to a depth of at least 3 feet below proposed foundation bearing grade.
- Following completion of the overexcavation, the resulting subgrade soils should be evaluated by the geotechnical engineer to identify any additional soils that should be overexcavated. The resulting soils should be scarified and moisture conditioned to achieve a moisture content of 0 to 4 percent above optimum moisture, to a depth of at least 12 inches. The overexcavation subgrade soils should then be recompacted under the observation of the geotechnical engineer. The previously excavated soils may then be replaced as compacted structural fill. All structural fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- The new pavement and flatwork subgrade soils are recommended to be scarified to a depth of 12± inches, moisture conditioned and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density.

Building Foundation Recommendations

- Spread footing foundations, supported in newly placed structural fill soils.
- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.

- Reinforcement consisting of at least two (2) No. 5 rebars (1 top and 1 bottom) in strip footings. Additional reinforcement may be necessary for structural considerations.

Building Floor Slab Recommendations

- Conventional Slab on Grade, at least 6 inches thick
- Modulus of Subgrade Reaction: k = 150 psi/in
- Reinforcement is not considered to be necessary for geotechnical considerations.
- The actual thickness and reinforcement of the floor slab should be determined by the structural engineer, based on the imposed slab loading.

Pavements

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	4	6	7	8	10
Compacted Subgrade	12	12	12	12	12

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		(TI =7.0)	(TI =8.0)	(TI =9.0)
PCC	5	5½	6½	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

2.0 SCOPE OF SERVICES

The scope of services performed for this project was in accordance with our Proposal No. 22P103R, dated January 10, 2022, revised date April 27, 2022. The scope of services included a visual site reconnaissance, subsurface exploration, field and laboratory testing, and geotechnical engineering analysis to provide criteria for preparing the design of the building foundations, building floor slab, and parking lot pavements along with site preparation recommendations and construction considerations for the proposed development. The evaluation of the environmental aspects of this site was beyond the scope of services for this geotechnical investigation.

3.0 SITE AND PROJECT DESCRIPTION

3.1 Site Conditions

The subject site is located at the northwest corner of Palmeto Way and Amargosa Road in Hesperia, California. The site is bounded to the north by Avenal Street, to the west by a vacant lot and a commercial/industrial building, to the south by Palmeto Way, and to the east by Amargosa Road. The general location of the site is illustrated on the Site Location Map, included as Plate 1 in Appendix A of this report.

The site consists of an irregularly-shaped property, 30.52± acres in size. The site is currently vacant and generally undeveloped, with the exception of a series of ramps and embankments located in the central region of the site, presumably used as a dirt bike track. The ground surface cover for the site generally consists of exposed soil with spare native shrubs and brush growth, and a few medium-sized trees scattered throughout.

Detailed topographic information was not available at the time of this report. Based on elevations obtained from Google Earth, and visual observations made at the time of the subsurface investigation, the overall site topography slopes downward to the northeast at a gradient of less than 2 percent.

3.2 Proposed Development

The most current conceptual site plan, identified as Preliminary Site Plan – Scheme 02 prepared by RGA, was provided to our office by the client. The plan indicates that the new development will consist of one (1) new warehouse, 545,000± ft² in size, located in the northern region of the subject site. Dock-high doors will be constructed on the south side of the proposed building. The new building is expected to be surrounded by asphaltic concrete (AC) pavements in the parking and drive areas, and Portland cement concrete (PCC) pavements in the loading dock area. Several landscaped planters and concrete flatwork are also expected to be included throughout the site.

Detailed structural information has not been provided. It is assumed that the new building will be a single-story structure of tilt-up concrete construction, supported on a conventional shallow foundation system with a concrete slab-on-grade floor. Based on the assumed construction, maximum column and wall loads are expected to be on the order of 100 kips and 4 to 7 kips per linear foot, respectively.

No significant amounts of below-grade construction, such as basements or crawl spaces, are expected to be included in the proposed development. Based on the assumed topography, cuts and fills of up to 5± feet are expected to be necessary to achieve the proposed building pad grades. It should be noted that this estimate does not include any remedial grading recommendations which are presented in a subsequent section of this report.

4.0 SUBSURFACE EXPLORATION

4.1 Scope of Exploration/Sampling Methods

The subsurface exploration conducted for this project consisted of nine (9) borings (identified as Boring Nos. B-1 through B-9) advanced to depths of 10 to 25± feet below the existing site grades. All of the borings were logged during drilling by a member of our staff.

The borings were advanced with hollow-stem augers, by a conventional truck-mounted drilling rig. Representative bulk and relatively undisturbed soil samples were taken during drilling. Relatively undisturbed soil samples were taken with a split barrel "California Sampler" containing a series of one inch long, 2.416± inch diameter brass rings. This sampling method is described in ASTM Test Method D-3550. In-situ samples were also taken using a 1.4± inch inside diameter split spoon sampler, in general accordance with ASTM D-1586. Both of these samplers are driven into the ground with successive blows of a 140-pound weight falling 30 inches. The blow counts obtained during driving are recorded for further analysis. Bulk samples were collected in plastic bags to retain their original moisture content. The relatively undisturbed ring samples were placed in molded plastic sleeves that were then sealed and transported to our laboratory.

The approximate locations of the borings are indicated on the Boring Location Plan, included as Plate 2 in Appendix A of this report. The Boring Logs, which illustrate the conditions encountered at the boring locations, as well as the results of some of the laboratory testing, are included in Appendix B.

4.2 Geotechnical Conditions

Artificial Fill

Artificial fill soils were encountered at the ground surface at Boring No. B-3, extending to a depth of 4½± feet below the existing site grades. The fill soils generally consist of medium dense silty sands to sandy silts. The fill soils possess a disturbed and mottled appearance resulting in their classification as artificial fill.

Alluvium

Native alluvium was encountered beneath the artificial fill soils at Boring No. B-3 and at the ground surface at the remaining boring locations, extending to at least the maximum depth explored of 25± feet. The near-surface soils generally consist of medium dense to dense sands, silty sands and sandy silts with varying gravel content, extending to depths of 5½ to 17± feet below the existing site grades. At greater depths, the alluvium generally consists of dense to very dense sands, silty sands, sandy silts, and clayey sands. Boring No. B-1 encountered a stratum consisting of very loose silty sands at a depth of 5½ to 8± feet. Boring No. B-2 encountered a stratum

consisting of very dense silty sands to sandy silts at a depth of 2½ to 4½± feet. Boring No. B-2 also encountered a stratum consisting of hard silty clays at a depth of 17 to 20± feet.

Groundwater

Free water was not encountered during the drilling of any of the borings. Based on the lack of any water within the borings and the moisture contents of the recovered soil samples, the static groundwater table is considered to have existed at a depth in excess of 25± feet at the time of the subsurface exploration.

Water level data was obtained from the California Department of Water Resources Water Data Library website, https://wdl.water.ca.gov/waterdatalibrary/. The nearest monitoring well on record (identified as State Well Number: 04N05W15G001S) is located approximately 3,200 feet west of the project site. Water level readings within this monitoring well indicate a high groundwater level of 638± feet below the ground surface in February 2015.

5.0 LABORATORY TESTING

The soil samples recovered from the subsurface exploration were returned to our laboratory for further testing to determine selected physical and engineering properties of the soils. The tests are briefly discussed below. It should be noted that the test results are specific to the actual samples tested, and variations could be expected at other locations and depths.

Classification

All recovered soil samples were classified using the Unified Soil Classification System (USCS), in accordance with ASTM D-2488. The field identifications were then supplemented with additional visual classifications and/or by laboratory testing. The USCS classifications are shown on the Boring Logs and are periodically referenced throughout this report.

Density and Moisture Content

The density has been determined for selected relatively undisturbed ring samples. These densities were determined in general accordance with the method presented in ASTM D-2937. The results are recorded as dry unit weight in pounds per cubic foot. The moisture contents are determined in accordance with ASTM D-2216, and are expressed as a percentage of the dry weight. These test results are presented on the Boring Logs.

Consolidation

Selected soil samples have been tested to determine their consolidation potential, in accordance with ASTM D-2435. The testing apparatus is designed to accept either natural or remolded samples in a one-inch-high ring, approximately 2.416 inches in diameter. Each sample is then loaded incrementally in a geometric progression and the resulting deflection is recorded at selected time intervals. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The samples are typically inundated with water at an intermediate load to determine their potential for collapse or heave. The results of the consolidation testing are plotted on Plates C-1 through C-7 in Appendix C of this report.

Maximum Dry Density and Optimum Moisture Content

One representative bulk sample has been tested for its maximum dry density and optimum moisture content. The results have been obtained using the Modified Proctor procedure, per ASTM D-1557 and are presented on Plate C-8 in Appendix C of this report. This test is generally used to compare the in-situ densities of undisturbed field samples, and for later compaction testing. Additional testing of other soil types or soil mixes may be necessary at a later date.

Direct Shear

One direct shear test was performed on a representative sample of the near-surface soils to determine its shear strength parameters in accordance with ASTM D-3080. The testing apparatus is designed to accept either natural or remolded samples in a one-inch high ring, approximately 2.416 inches in diameter. For tests on remolded soils, three samples of the same soil are prepared

by remolding them to 90± percent compaction and near optimum moisture. Each of the three samples are then loaded with different normal loads and the resulting shear strength is determined for that particular normal load. The shearing of the samples is performed at a rate slow enough to permit the dissipation of excess pore water pressure. Porous stones are in contact with the top and bottom of the sample to permit the addition or release of pore water. The results of the direct shear test are presented on Plate C-9 in Appendix C of this report.

Expansion Index

The expansion potential of the on-site soils was determined in general accordance with ASTM D-4829. The testing apparatus is designed to accept a 4-inch diameter, 1-in high, remolded sample. The sample is initially remolded to 50± 1 percent saturation and then loaded with a surcharge equivalent to 144 pounds per square foot. The sample is then inundated with water and allowed to swell against the surcharge. The resultant swell or consolidation is recorded after a 24-hour period. The results of the EI testing are as follows:

Sample Identification	Expansion Index	Expansive Potential
B-5 @ 0 to 5 feet	0	Non-Expansive

Soluble Sulfates

A representative sample of the near-surface soil was submitted to a subcontracted analytical laboratory for determination of soluble sulfate content. Soluble sulfates are naturally present in soils, and if the concentration is high enough, can result in degradation of concrete which comes into contact with these soils. The results of the soluble sulfate testing are presented below, and are discussed further in a subsequent section of this report.

Sample Identification	Soluble Sulfates (%)	Sulfate Classification
B-4 @ 0 to 5 feet	0.049	Not Applicable (S0)

Corrosivity Testing

One representative sample of the near-surface soils was submitted to a subcontracted corrosion engineering laboratory to identify potentially corrosive characteristics with respect to common construction materials. The corrosivity testing included a determination of the electrical resistivity, pH, and chloride and nitrate concentrations of the soils, as well as other tests. The results of some of these tests are presented below.

Sample Identification	Saturated Resistivity (ohm-cm)	pH	Chlorides (mg/kg)	Nitrates (mg/kg)
B-4 @ 0 to 5 feet	16,750	7.3	77.7	8.7

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our review, field exploration, laboratory testing and geotechnical analysis, the proposed development is considered feasible from a geotechnical standpoint. The recommendations contained in this report should be taken into the design, construction, and grading considerations.

The recommendations are contingent upon all grading and foundation construction activities being monitored by the geotechnical engineer of record. The recommendations are provided with the assumption that an adequate program of client consultation, construction monitoring, and testing will be performed during the final design and construction phases to verify compliance with these recommendations. Maintaining Southern California Geotechnical, Inc., (SCG) as the geotechnical consultant from the beginning to the end of the project will provide continuity of services. The geotechnical engineering firm providing testing and observation services shall assume the responsibility of Geotechnical Engineer of Record.

The Grading Guide Specifications, included as Appendix D, should be considered part of this report, and should be incorporated into the project specifications. The contractor and/or owner of the development should bring to the attention of the geotechnical engineer any conditions that differ from those stated in this report, or which may be detrimental for the development.

6.1 Seismic Design Considerations

The subject site is located in an area which is subject to strong ground motions due to earthquakes. The performance of a site-specific seismic hazards analysis was beyond the scope of this investigation. However, numerous faults capable of producing significant ground motions are located near the subject site. Due to economic considerations, it is not generally considered reasonable to design a structure that is not susceptible to earthquake damage. Therefore, significant damage to structures may be unavoidable during large earthquakes. The proposed structure should, however, be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage and loss of life.

Faulting and Seismicity

Research of available maps indicates that the subject site is not located within an Alquist-Priolo Earthquake Fault Zone. Furthermore, SCG did not identify any evidence of faulting during the geotechnical investigations. Therefore, the possibility of significant fault rupture on the site is considered to be low.

The potential for other geologic hazards such as seismically induced settlement, lateral spreading, tsunamis, inundation, seiches, flooding, and subsidence affecting the site is considered low. Based on Map Number 06071C6475H, dated August 28, 2008, prepared by the Federal Emergency Management Agency (FEMA) Flood Maps, the project site is in an area designated as Zone X which is determined to be outside the 0.2% annual chance floodplain.

Seismic Design Parameters

The 2019 California Building Code (CBC) provides procedures for earthquake resistant structural design that include considerations for on-site soil conditions, occupancy, and the configuration of the structure including the structural system and height. The seismic design parameters presented below are based on the soil profile and the proximity of known faults with respect to the subject site. Based on standards in place at the time of this report, the proposed development is expected to be designed in accordance with the requirements of the 2019 edition of the California Building Code (CBC), which was adopted on January 1, 2020.

The 2019 CBC Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool, a web-based software application available at the website www.seismicmaps.org. This software application calculates seismic design parameters in accordance with several building code reference documents, including ASCE 7-16, upon which the 2019 CBC is based. The application utilizes a database of risk-targeted maximum considered earthquake (MCER) site accelerations at 0.01-degree intervals for each of the code documents. The tables below were created using data obtained from the application. The output generated from this program is included as Plate E-1 in Appendix E of this report.

The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped S1 value greater than 0.2. However, Section 11.4.8 of ASCE 7-16 also indicates an exception to the requirement for a site-specific ground motion hazard analysis for certain structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) indicates that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." **Based on our understanding of the proposed development, the seismic design parameters presented below were calculated assuming that the exception in Section 11.4.8 applies to the proposed structure at this site. However, the structural engineer should verify that this exception is applicable to the proposed structure.** Based on the exception, the spectral response accelerations presented below were calculated using the site coefficients (Fa and Fv) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC.

2019 CBC SEISMIC DESIGN PARAMETERS

Parameter		Value
Mapped MCE_R Acceleration at 0.2 sec Period	S_S	1.466
Mapped MCE_R Acceleration at 1.0 sec Period	S_1	0.569
Site Class	---	D
Site Modified Spectral Acceleration at 0.2 sec Period	S_{MS}	1.466
Site Modified Spectral Acceleration at 1.0 sec Period	S_{M1}	0.985
Design Spectral Acceleration at 0.2 sec Period	S_{DS}	0.978
Design Spectral Acceleration at 1.0 sec Period	S_{D1}	0.657

It should be noted that the site coefficient F_v and the parameters S_{M1} and S_{D1} were not included in the SEAOC/OSHPD Seismic Design Maps Tool output for the 2019 CBC. We calculated these

parameters-based on Table 1613.2.3(2) in Section 16.4.4 of the 2019 CBC using the value of S_1 obtained from the Seismic Design Maps Tool, assuming that a site-specific ground motion hazards analysis is not required for the proposed building at this site.

Liquefaction

Liquefaction is the loss of the strength in generally cohesionless, saturated soils when the pore-water pressure induced in the soil by a seismic event becomes equal to or exceeds the overburden pressure. The primary factors which influence the potential for liquefaction include groundwater table elevation, soil type and grain size characteristics, relative density of the soil, initial confining pressure, and intensity and duration of ground shaking. The depth within which the occurrence of liquefaction may impact surface improvements is generally identified as the upper 50 feet below the existing ground surface. Liquefaction potential is greater in saturated, loose, poorly graded fine sands with a mean (d_{50}) grain size in the range of 0.075 to 0.2 mm (Seed and Idriss, 1971). Clayey (cohesive) soils or soils which possess clay particles (d<0.005mm) in excess of 20 percent (Seed and Idriss, 1982) are generally not considered to be susceptible to liquefaction, nor are those soils which are above the historic static groundwater table.

The California Geological Survey (CGS) has not yet conducted detailed seismic hazards mapping in the area of the subject site. The general liquefaction susceptibility of the site was determined by research of the San Bernardino County Land Use Plans, General Plan, Geologic Hazard Overlays. Maps FH05 for the Baldy Mesa Quadrangle and FH06 for the Hesperia Quadrangle indicate that the subject site is not located within an area of liquefaction susceptibility. Based on the mapping performed by the county of San Bernardino, the subsurface profile identified in this report, which includes moderate to high strength alluvium, and the lack of a historic high groundwater table within the upper 50± feet, liquefaction is not considered to be a design concern for this project.

6.2 Geotechnical Design Considerations

General

The near-surface soils encountered at the boring locations generally consist of native alluvium, with the exception of Boring No. B-3, extending to at least the maximum depth explored of 25± feet below the existing site grades. The artificial fill soils at Boring No. B-3 extend to a depth of 4½± feet from the ground surface. Based on a lack of documentation regarding the placement and compaction of the existing fill materials, these soils are considered to consist of undocumented fill. Therefore, the fill soils in their present condition are not suitable for the support of the foundation loads of the proposed building. The fill soils are underlain by native alluvium which possesses varying strengths and densities. The results of laboratory testing indicate that the near-surface soils within the upper 5 to 6± feet possess a potential for moderate to severe collapse when exposed to moisture infiltration as well as moderate consolidation when exposed to load increases in the range of those that will be exerted by the new foundations. The underlying native soils possess more favorable consolidation/collapse characteristics. Based on these conditions, remedial grading is recommended within the proposed building area, in order to remove and replace a portion of the near-surface alluvial soils as compacted structural fill.

Settlement

Laboratory testing indicates that some samples of soils taken from the near-surface native alluvial soils possess a minor collapse potential when exposed to moisture infiltration. The proposed remedial grading will remove the near-surface collapsible native soils from within the proposed building area. Therefore, following completion of the recommended grading, post-construction settlements are expected to be within tolerable limits.

Expansion

Laboratory testing performed on a representative sample of the near surface soils indicates that these materials are considered to be non-expansive (EI = 0). Therefore, no design considerations related to expansive soils are considered warranted for this site. It is recommended that additional expansion index testing be conducted at the completion of rough grading to verify the expansion potential of the as-graded building pad.

Soluble Sulfates

The results of the soluble sulfate testing indicate that the selected sample of the on-site soils corresponds to Class S0 with respect to the American Concrete Institute (ACI) Publication 318-14 Building Code Requirements for Structural Concrete and Commentary, Section 4.3. Therefore, specialized concrete mix designs are not considered to be necessary, with regard to sulfate protection purposes. It is, however, recommended that additional soluble sulfate testing be conducted at the completion of rough grading to verify the soluble sulfate concentrations of the soils which are present at pad grade within the building area.

Corrosion Potential

The results of laboratory testing indicate that the tested sample of the on-site soils possesses a saturated resistivity value of 16,750 ohm-cm, and a pH value of 7.3. These test results have been evaluated in accordance with guidelines published by the Ductile Iron Pipe Research Association (DIPRA). The DIPRA guidelines consist of a point system by which characteristics of the soils are used to quantify the corrosivity characteristics of the site. Resistivity and pH are two of the five factors that enter into the evaluation procedure. Redox potential, relative soil moisture content and sulfides are also included. Although sulfide testing was not part of the scope of services for this project, we have evaluated the corrosivity characteristics of the on-site soils using resistivity, pH and moisture content. Based on these factors, and utilizing the DIPRA procedure, the on-site soils are not considered to be corrosive to ductile iron pipe. Therefore, polyethylene protection is not expected to be required for cast iron or ductile iron pipes.

Based on American Concrete Institute (ACI) Publication 318 Building Code Requirements for Structural Concrete and Commentary, reinforced concrete that is exposed to external sources of chlorides requires corrosion protection for the steel reinforcement contained within the concrete. ACI 318 defines concrete exposed to moisture and an external source of chlorides as "severe" or exposure category C2. ACI 318 does not clearly define a specific chloride concentration at which contact with the adjacent soil will constitute a "C2" or severe exposure. However, the Caltrans Memo to Designers 10-5, Protection of Reinforcement Against Corrosion Due to Chlorides, Acids and Sulfates, dated June 2010, indicates that soils possessing chloride concentrations greater than 500 mg/kg are considered to be corrosive to reinforced concrete. The results of the

laboratory testing indicate chloride concentrations of 77.7 mg/kg. Although the soils contain some chlorides, we do not expect that the chloride concentrations of the tested soils are high enough to constitute a "severe" or C2 chloride exposure. Therefore, a chloride exposure category of C1 is considered appropriate for this site.

Nitrates present in soil can be corrosive to copper tubing at concentrations greater than 50 mg/kg. The tested sample possesses a nitrate concentration of 8.7 mg/kg. Based on this test result, the on-site soils are not considered to be corrosive to copper pipe.

Since SCG does not practice in the area of corrosion engineering, we recommend that the client contact a corrosion engineer to provide a more thorough evaluation of these test results.

Shrinkage/Subsidence

Removal and recompaction of the existing fill soils and near-surface alluvium is estimated to result in an average shrinkage of 4 to 14 percent. However, potential shrinkage for individual samples ranged locally between 3 and 22 percent. The potential shrinkage estimate is based on dry density testing performed on small-diameter samples taken at the boring locations. If a more accurate and precise shrinkage estimate is desired, SCG can perform a shrinkage study involving several excavated test-pits where in-place densities are determined using in-situ testing methods instead of laboratory density testing on small-diameter samples. Please contact SCG for details and a cost estimate regarding a shrinkage study, if desired.

Minor ground subsidence is expected to occur in the soils below the zone of removal, due to settlement and machinery working. The subsidence is estimated to be 0.1 feet.

These estimates are based on previous experience and the subsurface conditions encountered at the boring locations. The actual amount of subsidence is expected to be variable and will be dependent on the type of machinery used, repetitions of use, and dynamic effects, all of which are difficult to assess precisely.

Slope Stability

No evidence of landslides or deep-seated slope instability was noted during our investigation. However, the loose granular soils on sloping ground surfaces could be prone to surficial failures.

Newly constructed fill slopes, comprised of properly compacted engineered fill, at inclinations of 2h:1v (horizontal to vertical) will possess adequate gross stability.

Cut slopes excavated within the existing granular alluvial soils may be subject to surficial instability due to the lack of cohesion within these materials. Therefore, stability fills may be required within these areas. This condition may affect proposed cut slopes at the site. The need for stability fills should be determined by SCG as part of the future detailed grading plan review.

Grading and Foundation Plan Review

Grading and foundation plans were unavailable at the time of this report. It is therefore recommended that we be provided with copies of the preliminary grading and foundation plans,

when they become available, for review with regard to the conclusions, recommendations, and assumptions contained within this report.

6.3 Site Grading Recommendations

The grading recommendations presented below are based on the subsurface conditions encountered at the boring locations and our understanding of the proposed development. We recommend that all grading activities be completed in accordance with the Grading Guide Specifications included as Appendix D of this report, unless superseded by site-specific recommendations presented below.

Site Stripping

Vegetation including weeds, grasses, shrubs, and trees on the site should be stripped and disposed of off-site. Stripping should include any organic soils and any root masses from trees. The actual extent of site stripping should be determined in the field by the geotechnical engineer, based on the organic content and stability of the materials encountered.

Treatment of Existing Soils: Building Pad

Remedial grading should be performed within the proposed building area in order to remove the existing undocumented fill soils and a portion of the near-surface native alluvial soils. Based on conditions encountered at the boring locations, the existing soils within the proposed building area are recommended to be overexcavated to a depth of at least 5 feet below existing grade and to a depth of at least 4 feet below proposed building pad subgrade elevation, whichever is greater.

Additional overexcavation should be performed within the influence zones of the new foundations, to provide for a new layer of compacted structural fill extending to a depth of 3 feet below proposed foundation bearing grade.

The overexcavation area should extend at least 5 feet beyond the building foundations and perimeters. If the proposed structure incorporates any exterior columns (such as for a canopy or overhang) the area of overexcavation should also encompass these areas.

Following completion of the overexcavation, the subgrade soils within the building area should be evaluated by the geotechnical engineer to verify their suitability to serve as the structural fill subgrade, as well as to support the foundation loads of the new structure. This evaluation should include proofrolling and probing to identify any soft, loose, or otherwise unstable soils that must be removed. **Some localized areas of deeper excavation may be required if additional fill materials or loose, porous, or low-density native soils are encountered at the base of the overexcavation**. It should be noted that very loose soils extending to a depth of 8± feet were encountered at Boring No. B-1.

After a suitable overexcavation subgrade has been achieved, the exposed soils should be scarified to a depth of at least 12 inches, moisture conditioned to achieve a moisture content of 0 to 4 percent above optimum moisture content. The moisture conditioning of the overexcavation subgrade soils should be verified by the geotechnical engineer. The subgrade soils should then

be recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. The previously excavated soils may then be replaced as compacted structural fill.

Treatment of Existing Soils: Retaining Walls and Site Walls

The existing soils within the areas of any proposed retaining walls and non-retaining site walls should be overexcavated to a depth of 3 feet below foundation bearing grade and replaced as compacted structural fill, as discussed above for the proposed building pad. Any undocumented fill soils within any of these foundation areas should be removed in their entirety. The overexcavation areas should extend at least 5 feet beyond the foundation perimeters, and to an extent equal to the depth of fill below the new foundations. Any erection pads used to construct the walls are considered to be part of the foundation system with respect to these remedial grading recommendations. The overexcavation subgrade soils should be evaluated by the geotechnical engineer prior to scarifying, moisture conditioning, and recompacting the upper 12 inches of exposed subgrade soils. The previously excavated soils may then be replaced as compacted structural fill.

If the full lateral recommended remedial grading cannot be completed for the proposed retaining walls and site walls located along property lines, the foundations for those walls should be designed using a reduced allowable bearing pressure. Furthermore, the contractor should take necessary precautions to protect the adjacent improvements during rough grading. Specialized grading techniques, such as A-B-C slot cuts or temporary shoring, will likely be required during remedial grading. The geotechnical engineer of record should be contacted if additional recommendations, such as shoring design recommendations, are required during grading.

Treatment of Existing Soils: Parking and Drive Areas

Based on economic considerations, overexcavation of the existing near-surface existing soils in the new flatwork, parking and drive areas is not considered warranted, with the exception of areas where lower strength or unstable soils are identified by the geotechnical engineer during grading. Subgrade preparation in the new flatwork, parking and drive areas should initially consist of removal of all soils disturbed during stripping and demolition operations.

The geotechnical engineer should then evaluate the subgrade to identify any areas of additional unsuitable soils. Any such materials should be removed to a level of firm and unyielding soil. The exposed subgrade soils should then be scarified to a depth of 12± inches, moisture conditioned to 0 to 4 percent above the optimum moisture content, and recompacted to at least 90 percent of the ASTM D-1557 maximum dry density. Based on the presence of variable strength surficial soils throughout the site, it is expected that some isolated areas of additional overexcavation may be required to remove zones of lower strength, unsuitable soils.

The grading recommendations presented above for the proposed flatwork, parking and drive areas assume that the owner and/or developer can tolerate minor amounts of settlement within these areas. The grading recommendations presented above do not mitigate the extent of undocumented fill or compressible/collapsible native alluvium in the flatwork, parking and drive areas. As such, some settlement and associated pavement distress could occur. Typically, repair of such distressed areas involves significantly lower costs than completely mitigating these soils at the time of construction. If the owner cannot tolerate the risk of such settlements, the flatwork,

parking and drive areas should be overexcavated to a depth of 2 feet below proposed pavement subgrade elevation, with the resulting soils replaced as compacted structural fill.

Fill Placement

- Fill soils should be placed in thin (6± inches), near-horizontal lifts, moisture conditioned to within 0 to 4 percent above the optimum moisture content, and compacted.
- On-site soils may be used for fill provided they are cleaned of any debris to the satisfaction of the geotechnical engineer.
- All grading and fill placement activities should be completed in accordance with the requirements of the 2019 CBC and the grading code of the city of Hesperia.
- All fill soils should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density.
- Compaction tests should be performed periodically by the geotechnical engineer as random verification of compaction and moisture content. These tests are intended to aid the contractor. Since the tests are taken at discrete locations and depths, they may not be indicative of the entire fill and therefore should not relieve the contractor of his responsibility to meet the job specifications.

Imported Structural Fill

All imported structural fill should consist of very low expansive (EI < 20), well graded soils possessing at least 10 percent fines (that portion of the sample passing the No. 200 sieve). Additional specifications for structural fill are presented in the Grading Guide Specifications, included as Appendix D.

Utility Trench Backfill

In general, all utility trench backfill should be compacted to at least 90 percent of the ASTM D-1557 maximum dry density. As an alternative, a clean sand (minimum Sand Equivalent of 30) may be placed within trenches and compacted in place (jetting or flooding is not recommended). It is recommended that materials in excess of 3 inches in size not be used for utility trench backfill. Compacted trench backfill should conform to the requirements of the local grading code, and more restrictive requirements may be indicated by the city of Hesperia. All utility trench backfills should be witnessed by the geotechnical engineer. The trench backfill soils should be compaction tested where possible; probed and visually evaluated elsewhere.

Utility trenches which parallel a footing, and extending below a 1h:1v (horizontal to vertical) plane projected from the outside edge of the footing should be backfilled with structural fill soils, compacted to at least 90 percent of the ASTM D-1557 standard. Pea gravel backfill should not be used for these trenches.

Any soils used to backfill voids around subsurface utility structures, such as manholes or vaults, should be placed as compacted structural fill. If it is not practical to place compacted fill in these areas, then such void spaces may be backfilled with lean concrete slurry. Uncompacted pea gravel or sand is not recommended for backfilling these voids since these materials have a potential to settle and thereby cause distress of pavements placed around these subterranean structures.

6.4 Construction Considerations

Moisture Sensitive Subgrade Soils

Some of the near-surface soils possess appreciable silt and clay content and will become unstable if exposed to significant moisture infiltration or disturbance by construction traffic. If grading occurs during a period of relatively wet weather, an increase in subgrade instability in localized areas should also be expected. The site should, therefore, be graded to prevent ponding of surface water and to prevent water from running into excavations.

Excavation Considerations

The near-surface soils are predominately granular in composition. These materials will likely be subject to caving within shallow excavations. Where caving occurs within shallow excavations, flattened excavation slopes may be sufficient to provide excavation stability. On a preliminary basis, the inclination of temporary slopes should not exceed 2h:1v. Maintaining adequate moisture content within the near-surface soils will improve excavation stability. All excavation activities on this site should be conducted in accordance with Cal-OSHA regulations.

Groundwater

The historic groundwater table at this site is considered to exist at a depth greater than 25± feet. Therefore, groundwater is not expected to impact the grading or foundation construction activities.

6.5 Foundation Design and Construction

Based on the preceding grading recommendations, it is assumed that the new building pad will be underlain by structural fill soils used to replace the upper portion of the existing variable strength, potentially collapsible alluvial soils. These new structural fill soils are expected to extend to a depth of at least 3 feet below proposed foundation bearing grade, underlain by 1± foot of additional soil that has been densified and moisture conditioned in place. Based on this subsurface profile, the proposed structure may be supported on conventional shallow foundations.

Foundation Design Parameters

New square and rectangular footings may be designed as follows:

- Maximum, net allowable soil bearing pressure: 2,500 lbs/ft^2.
- Minimum wall/column footing width: 14 inches/24 inches.
- Minimum longitudinal steel reinforcement within strip footings: Two (2) No. 5 rebars (1 top and 1 bottom).

- Minimum foundation embedment: 12 inches into suitable structural fill soils, and at least 18 inches below adjacent exterior grade. Interior column footings may be placed immediately beneath the floor slab.

- It is recommended that the perimeter building foundations be continuous across all exterior doorways. Any flatwork adjacent to the exterior doors should be doweled into the perimeter foundations in a manner determined by the structural engineer.

The allowable bearing pressure presented above may be increased by one-third when considering short duration wind or seismic loads. The minimum steel reinforcement recommended above is based on geotechnical considerations; additional reinforcement may be necessary for structural considerations. The actual design of the foundations should be determined by the structural engineer.

Foundation Construction

The foundation subgrade soils should be evaluated at the time of overexcavation, as discussed in Section 6.3 of this report. It is further recommended that the foundation subgrade soils be evaluated by the geotechnical engineer immediately prior to steel or concrete placement. Soils suitable for direct foundation support should consist of newly placed structural fill, compacted to at least 90 percent of the ASTM D-1557 maximum dry density. Any unsuitable materials should be removed to a depth of suitable bearing compacted structural fill or suitable native alluvium (where reduced bearing pressures are utilized), with the resulting excavations backfilled with compacted fill soils. As an alternative, lean concrete slurry (500 to 1,500 psi) may be used to backfill such isolated overexcavations.

The foundation subgrade soils should also be properly moisture conditioned to 0 to 4 percent above the Modified Proctor optimum, to a depth of at least 12 inches below bearing grade. Since it is typically not feasible to increase the moisture content of the floor slab and foundation subgrade soils once rough grading has been completed, care should be taken to maintain the moisture content of the building pad subgrade soils throughout the construction process.

Estimated Foundation Settlements

Post-construction total and differential settlements of shallow foundations designed and constructed in accordance with the previously presented recommendations are estimated to be less than 1.0 and 0.5 inches, respectively. Differential movements are expected to occur over a 50-foot span, thereby resulting in an angular distortion of less than 0.002 inches per inch.

Lateral Load Resistance

Lateral load resistance will be developed by a combination of friction acting at the base of foundations and slab and the passive earth pressure developed by footings below grade. The following friction and passive pressure may be used to resist lateral forces:

- Passive Earth Pressure: 300 lbs/ft^3
- Friction Coefficient: 0.30

These are allowable values, and include a factor of safety. When combining friction and passive resistance, the passive pressure component should be reduced by one-third. These values assume that footings will be poured directly against compacted structural fill. The maximum allowable passive pressure is 3,000 lbs/ft^2.

6.6 Floor Slab Design and Construction

Subgrades which will support new floor slab should be prepared in accordance with the recommendations contained in the ***Site Grading Recommendations*** section of this report. Based on the anticipated grading which will occur at this site, the floor of the new structure may be constructed as a conventional slab-on-grade supported on newly placed structural fill soils. These fill soils are expected to extend to a depth of at least 4 feet below finished pad grade. Based on geotechnical considerations, the floor slab may be designed as follows:

- Minimum slab thickness: 6 inches.

- Modulus of Subgrade Reaction: k = 150 psi/in

- Minimum slab reinforcement: Reinforcement is not required for geotechnical conditions. The actual floor slab reinforcement should be determined by the structural engineer, based upon the imposed loading.

- Slab underlayment: If moisture sensitive floor coverings will be used the minimum slab underlayment should consist of a moisture vapor barrier constructed below the entire area where such moisture sensitive floor coverings are anticipated. The moisture vapor barrier should meet or exceed the Class A rating as defined by ASTM E 1745-97 and have a permeance rating less than 0.01 perms as described in ASTM E 96-95 and ASTM E 154-88. A polyolefin material such as a 15 mil. Stego® Wrap Vapor Barrier or equivalent will meet these specifications. The moisture vapor barrier should be properly constructed in accordance with all applicable manufacturer specifications. The need for sand and/or the amount of sand above the moisture vapor barrier should be specified by the structural engineer or concrete contractor. The selection of sand above the barrier is not a geotechnical engineering issue and hence outside our purview.

- Moisture condition the floor slab subgrade soils to 0 to 4 percent above the Modified Proctor optimum moisture content, to a depth of 12 inches. The moisture content of the floor slab subgrade soils should be verified by the geotechnical engineer within 24 hours prior to concrete placement.

- Proper concrete curing techniques should be utilized to reduce the potential for slab curling or the formation of excessive shrinkage cracks.

The actual design of the floor slab should be completed by the structural engineer to verify adequate thickness and reinforcement.

6.7 Retaining Wall Design and Construction

Small retaining walls are expected to be necessary in the area of the new truck loading docks and may also be required to facilitate the new site grades. The parameters recommended for use in the design of these walls are presented below.

Retaining Wall Design Parameters

Based on the soil conditions encountered at the boring locations, the following parameters may be used in the design of new retaining walls for this site. We have provided parameters assuming the use of on-site soils for retaining wall backfill. The near-surface soils generally consist of sands, silty sands and sandy silts. Based on the results of laboratory testing, these materials are expected to possess an internal angle of friction of at least 34 degrees when compacted to 90 percent of the ASTM D-1557 maximum dry density.

If desired, SCG could provide design parameters for an alternative select backfill material behind the retaining walls. The use of select backfill material could result in lower lateral earth pressures. In order to use the design parameters for the imported select fill, this material must be placed within the entire active failure wedge. This wedge is defined as extending from the heel of the retaining wall upwards at an angle of approximately 60° from horizontal. If select backfill material behind the retaining wall is desired, SCG should be contacted for supplementary recommendations.

RETAINING WALL DESIGN PARAMETERS

Design Parameter		Soil Type
		On-Site Silty Sands
Internal Friction Angle (ϕ)		34°
Unit Weight		135 lbs/ft^3
Equivalent Fluid Pressure:	Active Condition (level backfill)	38 lbs/ft^3
	Active Condition (2h:1v backfill)	57 lbs/ft^3
	At-Rest Condition (level backfill)	60 lbs/ft^3

The walls should be designed using a soil-footing coefficient of friction of 0.30 and an equivalent passive pressure of 300 lbs/ft^3. The structural engineer should incorporate appropriate factors of safety in the design of the retaining walls.

The active earth pressure may be used for the design of retaining walls that do not directly support structures or support soils that in turn support structures and which will be allowed to deflect. The at-rest earth pressure should be used for walls that will not be allowed to deflect such as those which will support foundation bearing soils, or which will support foundation loads directly.

Where the soils on the toe side of the retaining wall are not covered by a "hard" surface such as a structure or pavement, the upper 1 foot of soil should be neglected when calculating passive resistance due to the potential for the material to become disturbed or degraded during the life of the structure.

Retaining Wall Foundation Design

The retaining wall foundations should be supported within newly placed structural fill. Foundations to support new retaining walls should be designed in accordance with the general Foundation Design Parameters presented in a previous section of this report.

Seismic Lateral Earth Pressures

In accordance with the 2019 CBC, any retaining walls more than 6 feet in height must be designed for seismic lateral earth pressures. If walls 6 feet or more are required for this site, the geotechnical engineer should be contacted for supplementary seismic lateral earth pressure recommendations.

Backfill Material

On-site soils may be used to backfill the retaining walls. However, all backfill material placed within 3 feet of the back-wall face should have a particle size no greater than 3 inches. The retaining wall backfill materials should be well graded.

It is recommended that a properly installed prefabricated drainage composite such as the MiraDRAIN 6000XL (or approved equivalent), which is specifically designed for use behind retaining walls, be placed against the face on the back side of the retaining walls. This material should extend from the top of the retaining wall footing to within 1 foot of the ground surface on the back side of the retaining wall. A 12-inch-thick layer of a low permeability soil should be placed over the backfill to reduce surface water migration to the underlying soils.

All retaining wall backfill should be placed and compacted under engineering-controlled conditions in the necessary layer thicknesses to ensure an in-place density between 90 and 93 percent of the maximum dry density as determined by the Modified Proctor test (ASTM D1557-91). Care should be taken to avoid over-compaction of the soils behind the retaining walls, and the use of heavy compaction equipment should be avoided.

Subsurface Drainage

As previously indicated, the retaining wall design parameters are based upon drained backfill conditions. Consequently, some form of permanent drainage system will be necessary in conjunction with the appropriate backfill material. Subsurface drainage may consist of either:

- A weep hole drainage system typically consisting of a series of 2-inch diameter holes in the wall situated slightly above the ground surface elevation on the exposed side of the wall and at an approximate 10-foot on-center spacing. Alternatively, 4-inch diameter holes at an approximate 20-foot on-center spacing can be used for this type of drainage system. In addition, the weep holes should include a 2 cubic foot pocket of open graded gravel, surrounded by an approved geotextile fabric, at each weep hole location.

- A 4-inch diameter perforated pipe surrounded by 2 cubic feet of gravel per linear foot of drain placed behind the wall, above the retaining wall footing. The gravel layer should be wrapped in a suitable geotextile fabric to reduce the potential for migration of fines. The footing drain should be extended to daylight or tied into a storm drainage system. The actual design of this type of system should be determined by the civil engineer to verify that the drainage system possesses the adequate capacity and slope for its intended use.

Weep holes or a footing drain will not be required for building stem walls.

6.8 Pavement Design Parameters

Site preparation in the pavement area should be completed as previously recommended in the ***Site Grading Recommendations*** section of this report. The subsequent pavement recommendations assume proper drainage and construction monitoring, and are based on either PCA or CALTRANS design parameters for a twenty (20) year design period. However, these designs also assume a routine pavement maintenance program to obtain the anticipated 20-year pavement service life.

Pavement Subgrades

It is anticipated that the new pavements will be primarily supported on a layer of compacted structural fill, consisting of scarified, thoroughly moisture conditioned and recompacted existing soils. The on-site soils generally consist of sands, silty sands and sandy silts. Based on their classification, these materials are expected to possess good to excellent pavement support characteristics, with R-values in the range of 40 to 50. Since R-value testing was not included in the scope of services for this project, the subsequent pavement design is based upon an assumed R-value of 40. Any fill material imported to the site should have support characteristics equal to or greater than that of the on-site soils and be placed and compacted under engineering-controlled conditions. It is recommended that R-value testing be performed after completion of rough grading to verify that the pavement design recommendations presented herein are valid.

Asphaltic Concrete

Presented below are the recommended thicknesses for new flexible pavement structures consisting of asphaltic concrete over a granular base. The pavement designs are based on the traffic indices (TI's) indicated. The client and/or civil engineer should verify that these TI's are representative of the anticipated traffic volumes. If the client and/or civil engineer determine that the expected traffic volume will exceed the applicable traffic index, we should be contacted for supplementary recommendations. The design traffic indices equate to the following approximate daily traffic volumes over a 20-year design life, assuming six operational traffic days per week.

Traffic Index	No. of Heavy Trucks per Day
4.0	0
5.0	1
6.0	3
7.0	11
8.0	35
9.0	93

For the purpose of the traffic volumes indicated above, a truck is defined as a 5-axle tractor trailer unit with one 8-kip axle and two 32-kip tandem axles. All of the traffic indices allow for 1,000 automobiles per day.

ASPHALT PAVEMENTS (R = 40)					
Materials	**Thickness (inches)**				
	Auto Parking and Auto Drive Lanes (TI = 4.0 to 5.0)	Truck Traffic			
		TI = 6.0	TI = 7.0	TI = 8.0	TI = 9.0
Asphalt Concrete	3	3½	4	5	5½
Aggregate Base	4	6	7	8	10
Compacted Subgrade	12	12	12	12	12

The aggregate base course should be compacted to at least 95 percent of the ASTM D-1557 maximum dry density. The asphaltic concrete should be compacted to at least 95 percent of the Marshall maximum density, as determined by ASTM D-2726. The aggregate base course may consist of crushed aggregate base (CAB) or crushed miscellaneous base (CMB), which is a recycled gravel, asphalt and concrete material. The gradation, R-Value, Sand Equivalent, and Percentage Wear of the CAB or CMB should comply with appropriate specifications contained in the current edition of the "Greenbook" Standard Specifications for Public Works Construction.

Portland Cement Concrete

The preparation of the subgrade soils within concrete pavement areas should be performed as previously described for proposed asphalt pavement areas. The minimum recommended thicknesses for the Portland Cement Concrete pavement sections are as follows:

PORTLAND CEMENT CONCRETE PAVEMENTS (R = 40)				
Materials	**Thickness (inches)**			
	Autos and Light Truck Traffic (TI = 6.0)	Truck Traffic		
		TI = 7.0	TI = 8.0	TI = 9.0
PCC	5	5½	6½	8
Compacted Subgrade (95% minimum compaction)	12	12	12	12

The concrete should have a 28-day compressive strength of at least 3,000 psi. Any reinforcement within the PCC pavements should be determined by the project structural engineer. The maximum joint spacing within all of the PCC pavements is recommended to be equal to or less than 30 times the pavement thickness.

7.0 GENERAL COMMENTS

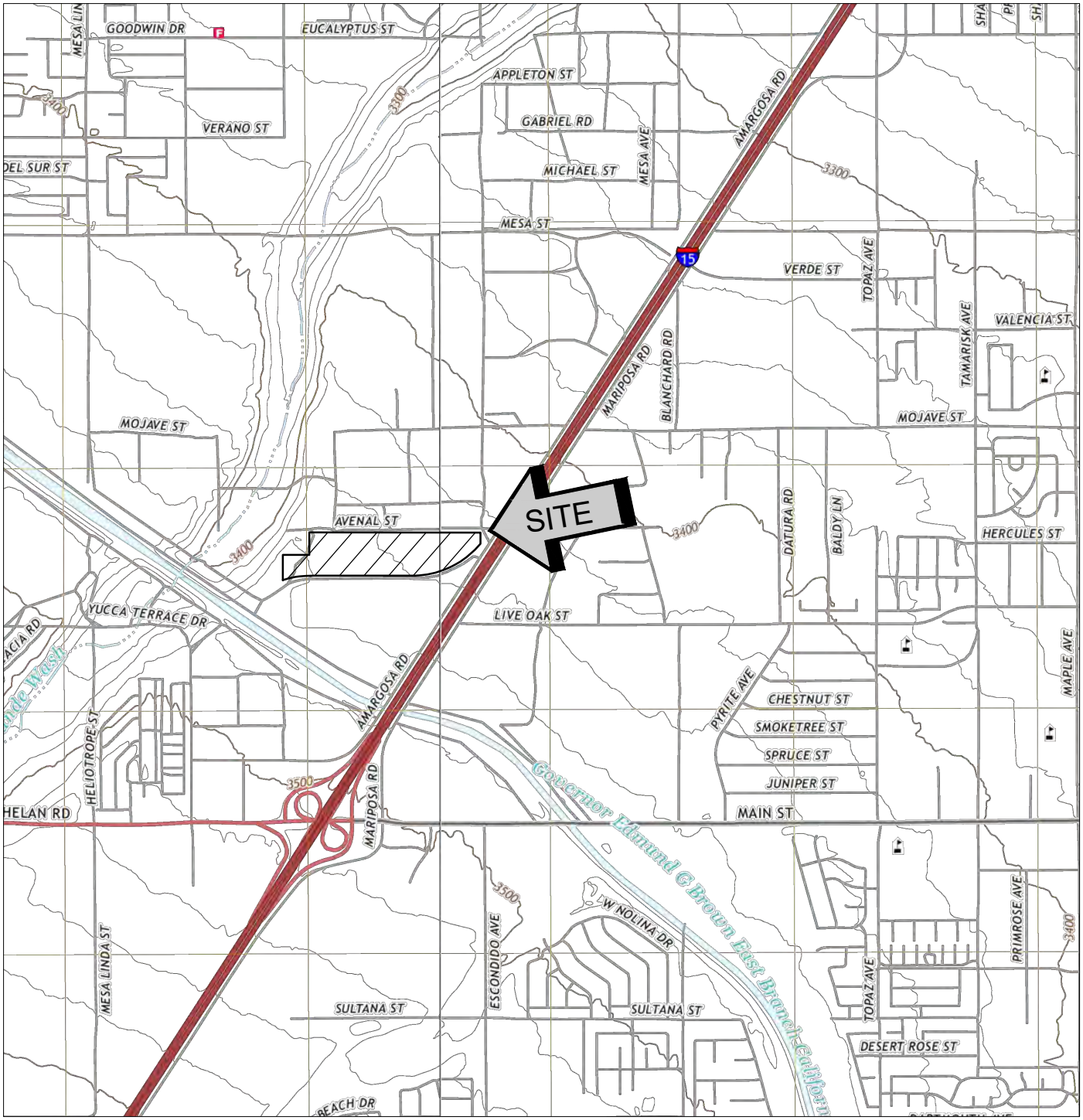
This report has been prepared as an instrument of service for use by the client, in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, civil engineer, and/or structural engineer. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical, Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur. The client(s)' reliance upon this report is subject to the Engineering Services Agreement, incorporated into our proposal for this project.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and sample depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted.

The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

APPENDIX A



SOURCE: USGS TOPOGRAPHIC MAPS OF THE BALDY MESA QUADRANGLE AND THE HESPERIA QUADRANGLE, SAN BERNARDINO COUNTY, CALIFORNIA, 2021.

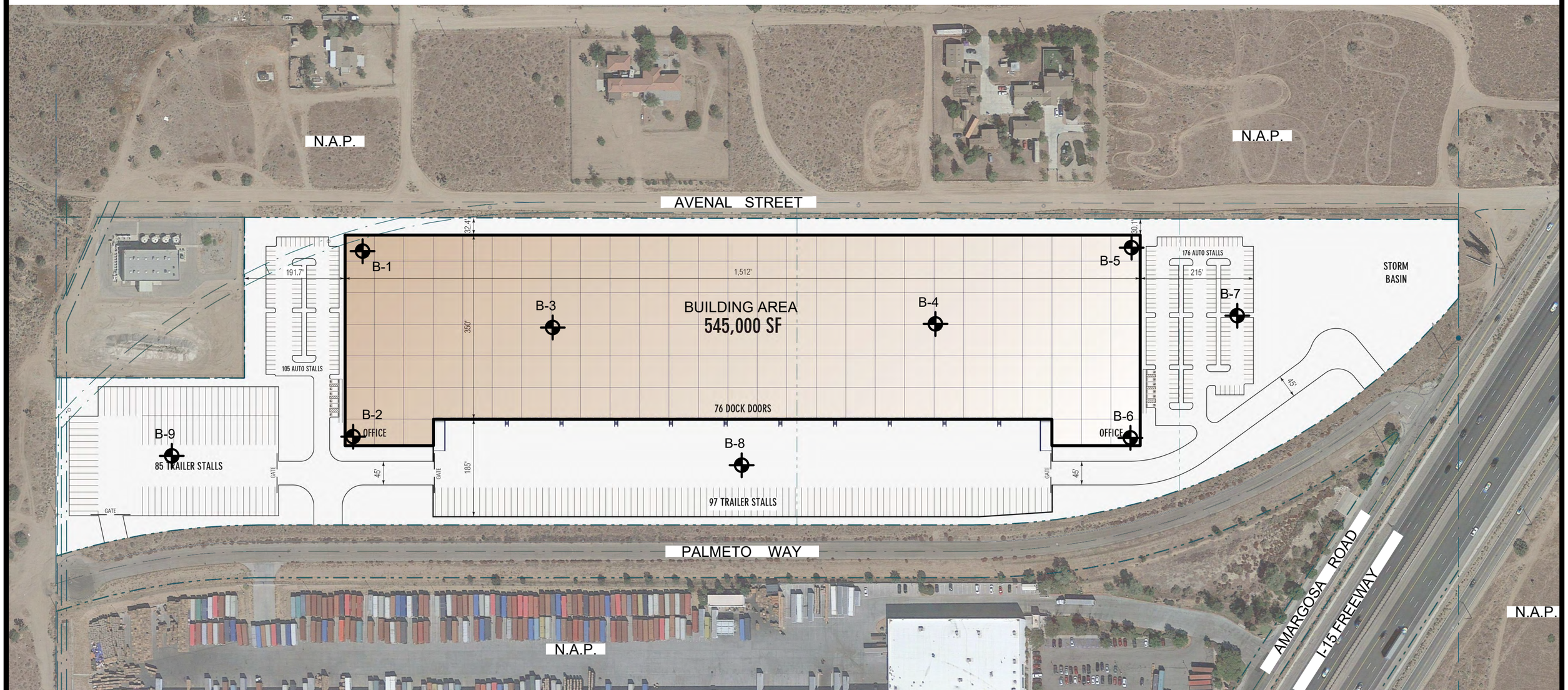
SITE LOCATION MAP

PROPOSED WAREHOUSE

HESPERIA, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: JJH CHKD: RGT	
SCG PROJECT 22G203-1	
PLATE 1	

SOUTHERN CALIFORNIA GEOTECHNICAL



GEOTECHNICAL LEGEND

APPROXIMATE BORING LOCATION

NORTH

NOTE: SITE PLAN PROVIDED BY THE CLIENT. AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH (2020).

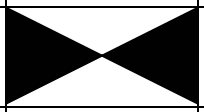
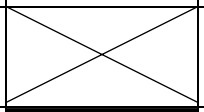
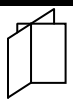
BORING LOCATION PLAN
PROPOSED WAREHOUSE
HESPERIA, CALIFORNIA

SCALE: 1" = 180'
DRAWN: OS
CHKD: RGT
SCG PROJECT 22G203-1
PLATE 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX B

BORING LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH: Distance in feet below the ground surface.

SAMPLE: Sample Type as depicted above.

BLOW COUNT: Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.: Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG: Graphic Soil Symbol as depicted on the following page.

DRY DENSITY: Dry density of an undisturbed or relatively undisturbed sample in lbs/ft^3.

MOISTURE CONTENT: Moisture content of a soil sample, expressed as a percentage of the dry weight.

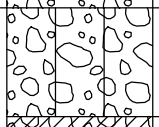
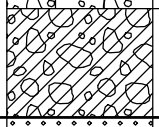
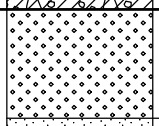
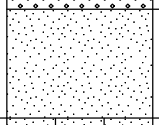
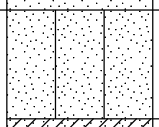
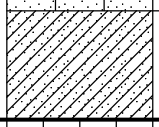
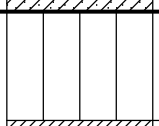
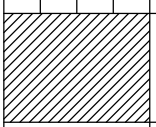
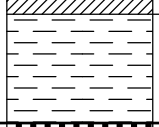
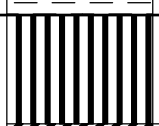
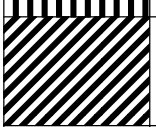
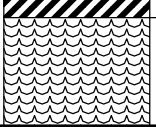
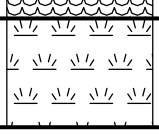
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT: The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE: The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR: The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-1

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 17 feet
READING TAKEN: At Completion

FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		12			ALLUVIUM: Brown Silty fine Sand, little medium to coarse Sand, trace fine Gravel, little fine root fibers, medium dense-dry		2					
		10			Brown Silty fine to medium Sand, little coarse Sand, little fine Gravel, medium dense-dry		2					
5		2			@ 6 feet, very loose		2					
		15			Brown fine to medium Sand, little coarse Sand, trace to little Silt, trace fine Gravel, medium dense-dry to damp		2					
10												
		17					2					
15												
		62			Brown Silty fine Sand to fine Sandy Silt, little Clay, little medium to coarse Sand, trace fine Gravel, very dense-damp		4					
20												
		52			Gray Brown Clayey fine Sand, trace to little medium to coarse Sand, trace fine Gravel, very dense-damp		6					
25					Boring Terminated at 25'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-2

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 13 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		37			ALLUVIUM: Light Brown Silty fine Sand, trace medium to coarse Sand, trace fine root fibers, medium dense-dry	120	1					
		50/5"			Light Brown Silty fine Sand to fine Sandy Silt, little medium Sand, very dense-dry	112	1					
5		45			Brown fine to coarse Sand, trace Silt, trace fine Gravel, medium dense to dense-damp	111	2					
		29					2					@ 7 feet, Disturbed Sample
		23			Brown Silty fine to medium Sand, trace coarse Sand, medium dense-dry	100	1					
10												
		27					2					
15												
		90	4.5		Brown Silty Clay, trace fine to medium Sand, little Calcareous nodules, hard-damp		6					
20					Boring Terminated at 20'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG **PLATE B-2**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-3

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 8 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		17			FILL: Brown Silty fine Sand to fine Sandy Silt, little medium to coarse Sand, trace fine Gravel, trace fine root fibers, medium dense-dry	109	2					
		28				112	1					
5		22			ALLUVIUM: Light Brown Silty fine to medium Sand, trace to little coarse Sand, trace fine Gravel, medium dense-dry	111	2					
		75/11"			@ 7 feet, very dense	111	2					
		50			Light Brown Silty fine Sand to fine Sandy Silt, little medium Sand, dense-dry	109	2					
10												
		44			Light Brown Silty fine to coarse Sand, trace fine Gravel, dense-dry		1					
15					Boring Terminated at 15'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-3

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-4

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 14 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		9			ALLUVIUM: Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel, trace fine root fibers, loose-dry		1					
		29			@ 3½ feet, little coarse Sand, trace to little fine Gravel, medium dense		2					
5		44			Brown Clayey fine to medium Sand, little coarse Sand, trace Silt, trace fine Gravel, dense-damp		3					
		36			Brown fine to coarse Sand, little Clay, trace Silt, dense-dry		2					
10												
		35			Brown fine to coarse Sand, little Silt, trace Clay, dense-dry to damp		2					
15												
		30					2					
20					Boring Terminated at 20'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-4

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-5

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 19 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		29			ALLUVIUM: Light Brown Silty fine Sand to fine Sandy Silt, trace medium to coarse Sand, trace fine Gravel, trace fine root fibers, medium dense-dry	117	1					EI = 0 @ 0-5 feet
		64			Brown Silty fine to medium Sand, trace Clay, trace coarse Sand, trace fine Gravel, trace Calcareous nodules, dense-damp	111	3					
5		53			@ 5 feet, little Clay	115	4					
		26			Brown fine to medium Sand, little coarse Sand, trace Clay, little Silt, trace to little fine Gravel, medium dense-dry to damp	112	3					
		54			@ 9 feet, dense	115	2					
10												
		39			Light Gray Brown Silty fine to coarse Sand, trace fine to coarse Gravel, dense-dry		1					
15												
		37			Brown fine to medium Sand, little coarse Sand, little Silt, trace fine Gravel, dense-damp		3					
20					Boring Terminated at 20'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG **PLATE B-5**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-6

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 14.5 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		64			ALLUVIUM: Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel, trace fine root fibers, very dense-dry		2					
		31			Light Brown Silty fine to coarse Sand, trace Clay nodules, little fine Gravel, dense-dry		2					
5		25			Gray Brown fine to coarse Sand, little Silt, little fine Gravel, medium dense-dry to damp		2					
		22			Brown Silty fine to medium Sand, little coarse Sand, trace Clay, medium dense-dry		2					
10												
					Light Brown Silty fine Sand, little medium to coarse Sand, dense-dry							
		30					2					
15												
					Light Brown Silty fine to medium Sand to fine to medium Sandy Silt, trace coarse Sand, trace fine Gravel, dense-dry to damp							
		33					3					
20												
		34					2					
25					Boring Terminated at 25'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-6

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-7

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 5.5 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		20			ALLUVIUM: Brown fine to medium Sandy Silt, trace coarse Sand, medium dense-dry		2					
		33			Gray Brown Silty fine to coarse Sand, trace Clay, little fine Gravel, medium dense to dense-damp		3					
5		27					3					
		33			Gray Brown fine to coarse Sand, trace Silt, little to some fine Gravel, dense-dry		1					
10					Boring Terminated at 10'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG **PLATE B-7**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-8

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 4.5 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		55			ALLUVIUM: Light Gray Brown Silty fine to medium Sand, trace coarse Sand, trace to little Clay, dense to very dense-damp		3					
		43					3					
5												
		31			Light Brown Silty fine to medium Sand, trace to little coarse Sand, trace fine Gravel, medium dense to dense-dry to damp		3					
		25					1					
10					Boring Terminated at 10'							

TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG **PLATE B-8**

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. B-9

JOB NO.: 22G203-1
PROJECT: Proposed Warehouse
LOCATION: Hesperia, California

DRILLING DATE: 6/15/22
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Joey Hernandez

WATER DEPTH: Dry
CAVE DEPTH: 4 feet
READING TAKEN: At Completion

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
		10			ALLUVIUM: Light Brown fine Sandy Silt, trace medium Sand, trace fine root fibers, medium dense-dry		1					
		11			Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel, medium dense-dry		1					
5		21			@ 6 feet, little coarse Sand		1					
		36			Light Brown fine Sandy Silt, little medium to coarse Sand, dense-damp		3					
10					Boring Terminated at 10'							

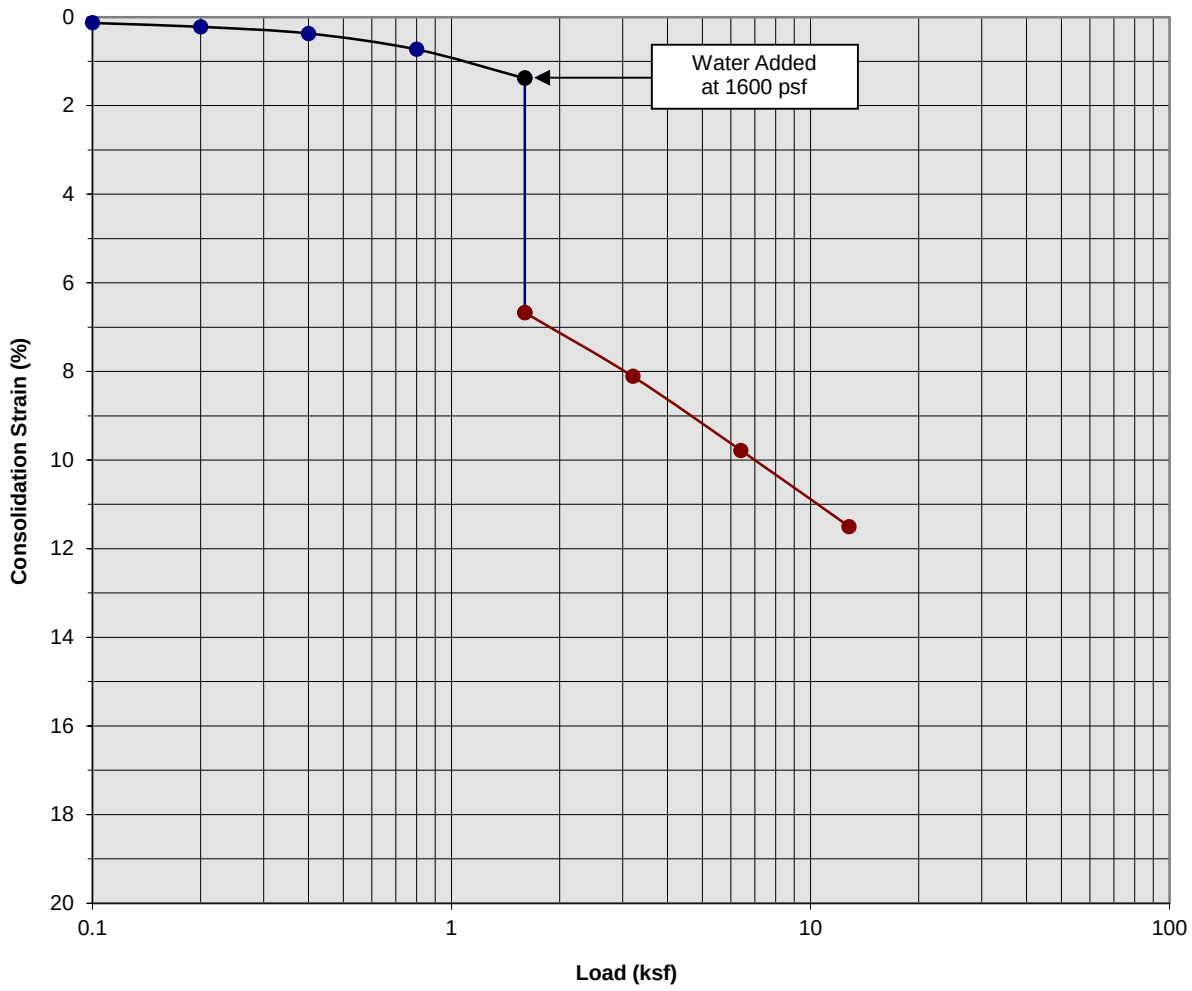
TBL 22G203-1.GPJ SOCALGEO.GDT 7/18/22

TEST BORING LOG

PLATE B-9

APPENDIX C

Consolidation/Collapse Test Results



Classification: Light Brown Silty fine Sand to fine Sandy Silt, little medium Sand

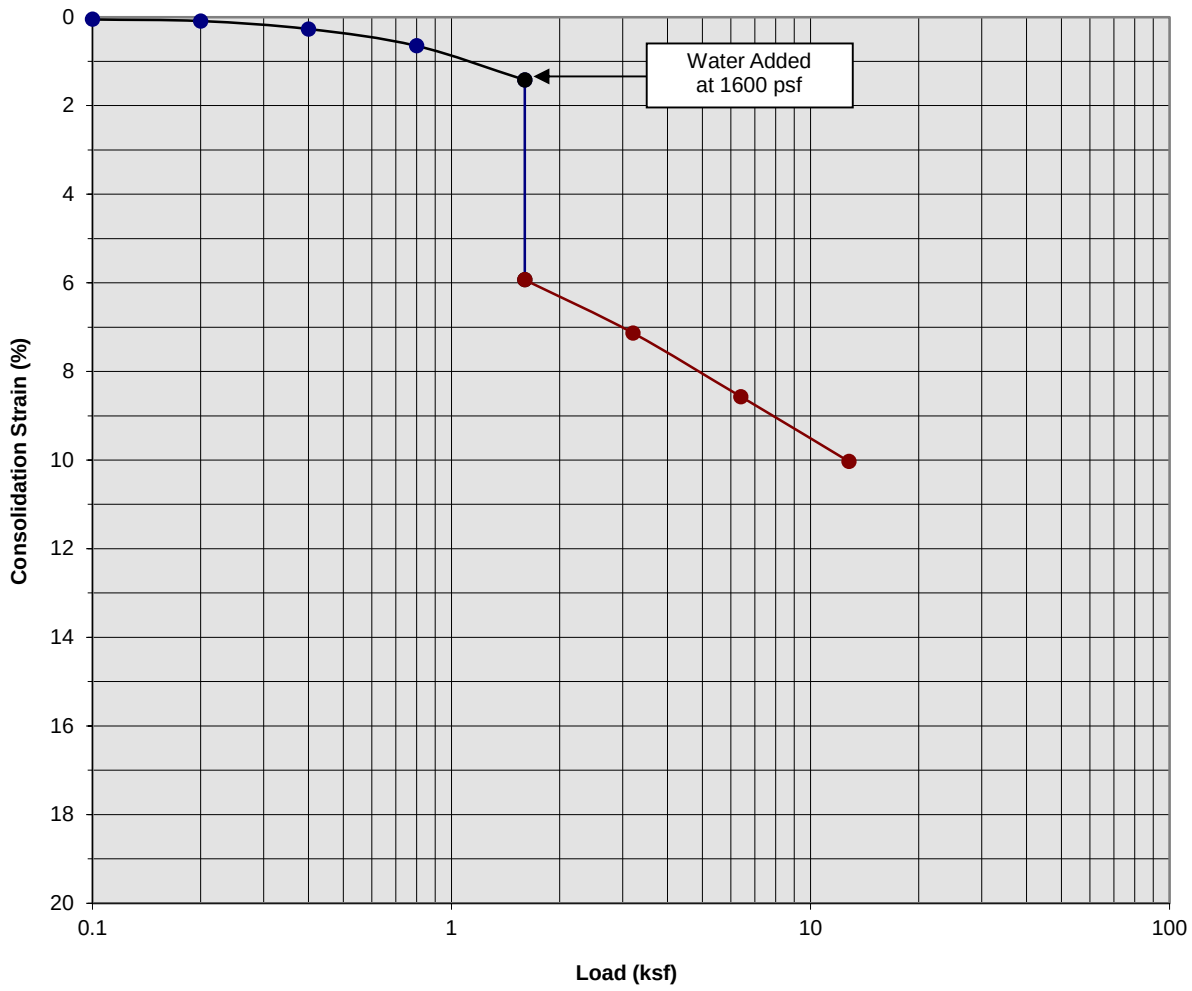
Boring Number:	B-2	Initial Moisture Content (%)	1
Sample Number:	---	Final Moisture Content (%)	11
Depth (ft)	3 to 4	Initial Dry Density (pcf)	110.9
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	124.5
Specimen Thickness (in)	1.0	Percent Collapse (%)	5.29

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to coarse Sand, trace Silt, trace fine Gravel

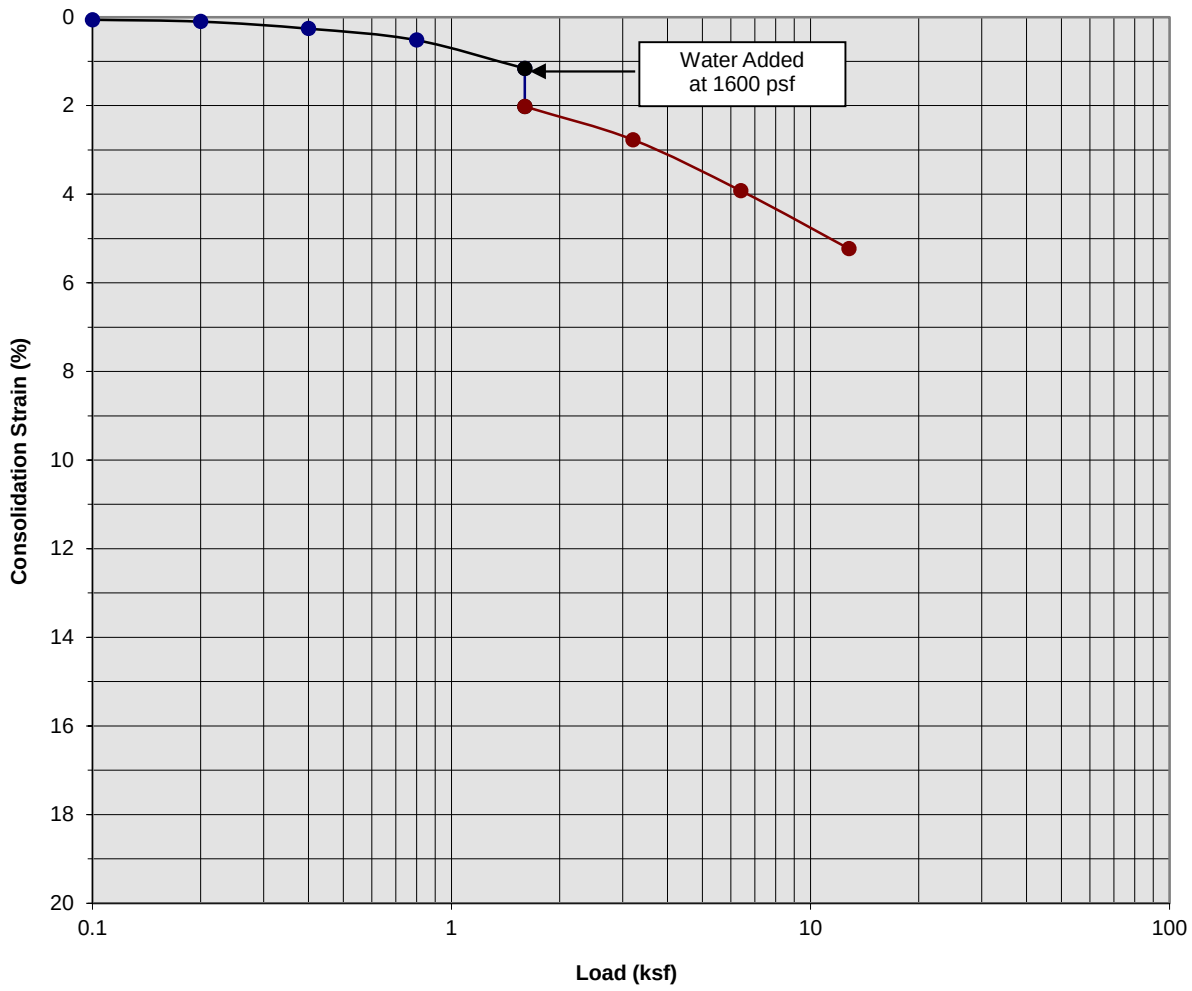
Boring Number:	B-2	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	14
Depth (ft)	5 to 6	Initial Dry Density (pcf)	110.8
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	122.5
Specimen Thickness (in)	1.0	Percent Collapse (%)	4.51

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to medium Sand, trace coarse Sand

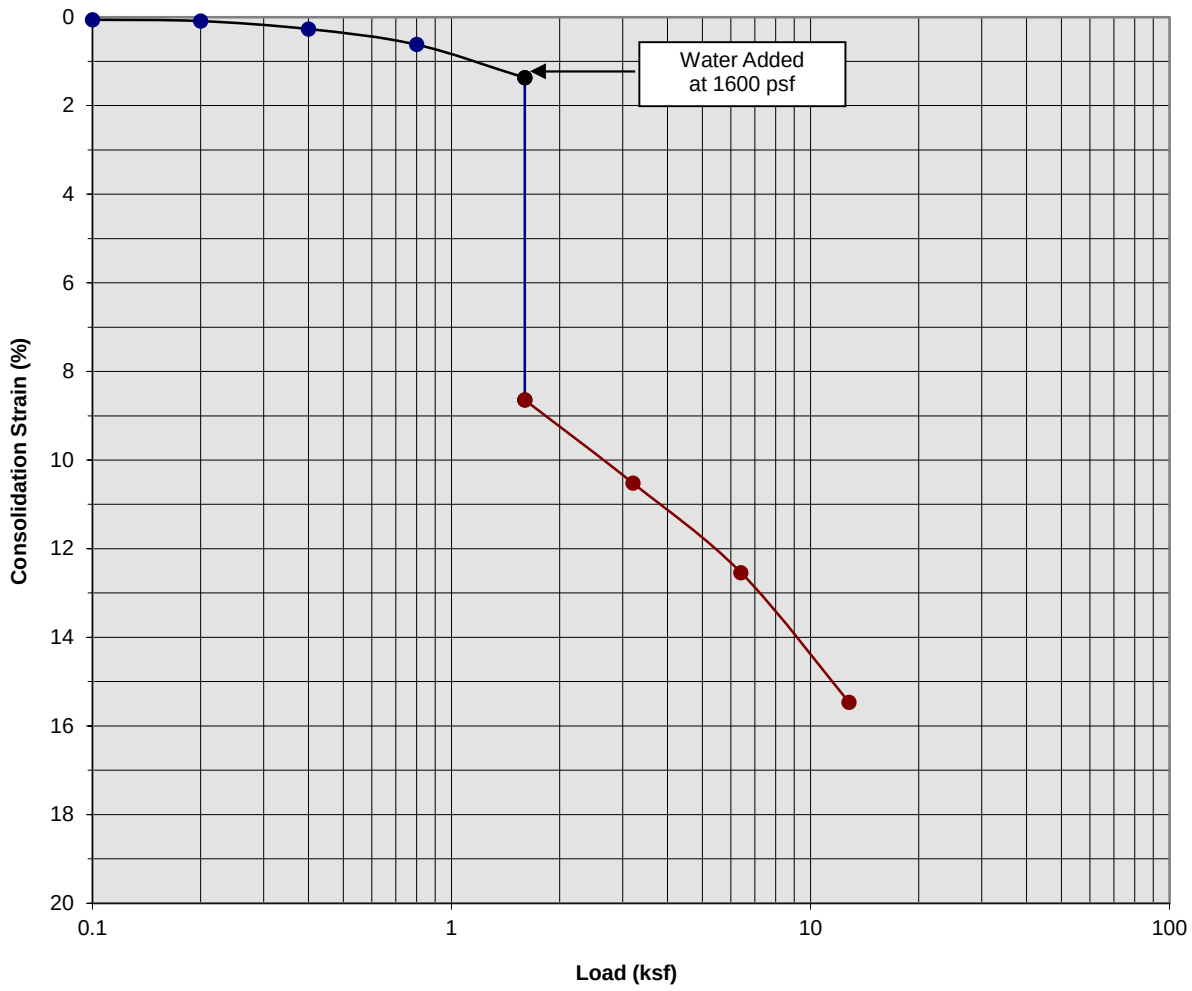
Boring Number:	B-2	Initial Moisture Content (%)	1
Sample Number:	---	Final Moisture Content (%)	17
Depth (ft)	9 to 10	Initial Dry Density (pcf)	99.8
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	104.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.86

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to medium Sand, trace Clay, trace coarse Sand

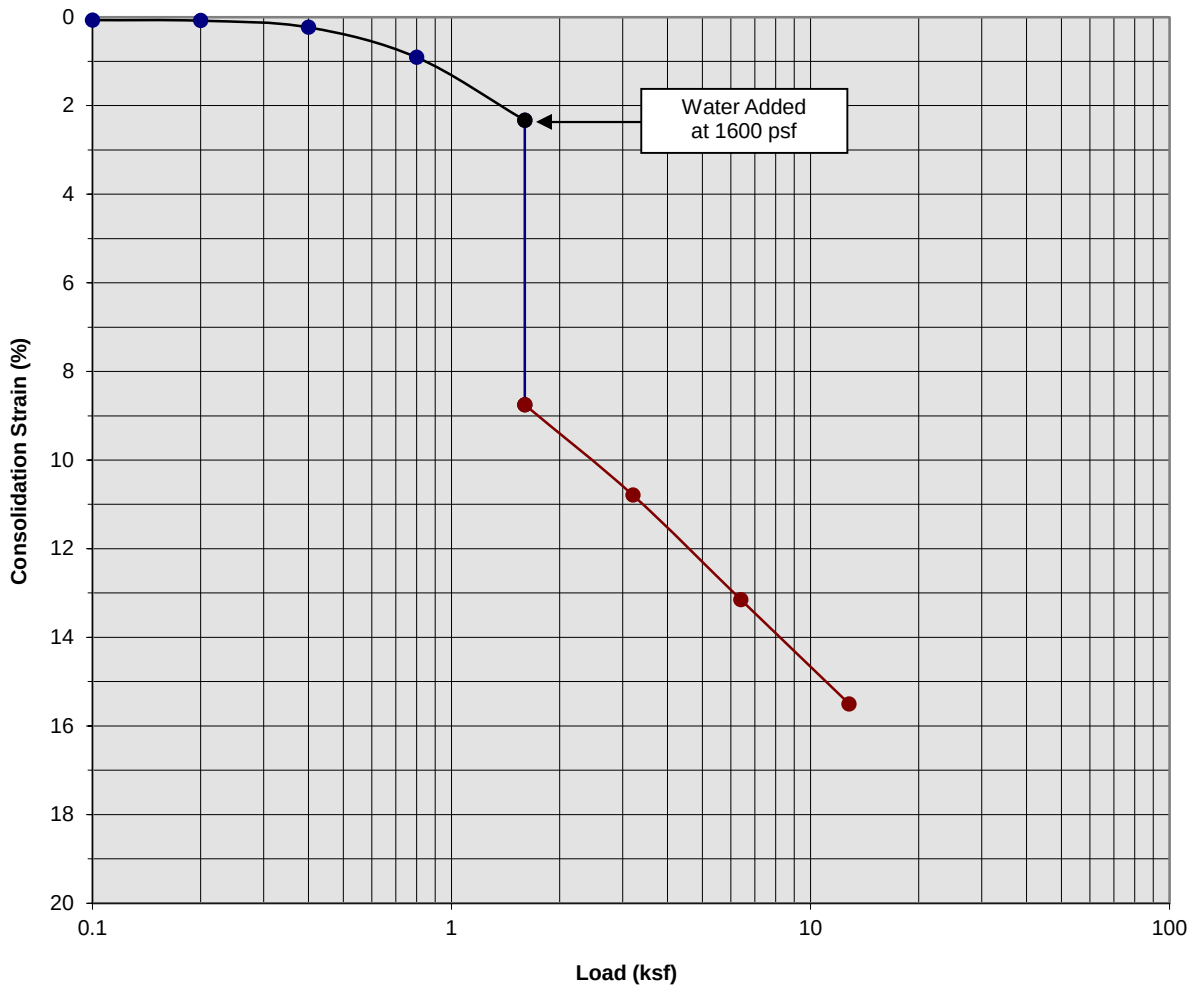
Boring Number:	B-5	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	12
Depth (ft)	3 to 4	Initial Dry Density (pcf)	111.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	130.8
Specimen Thickness (in)	1.0	Percent Collapse (%)	7.27

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown Silty fine to medium Sand, little Clay, trace coarse Sand

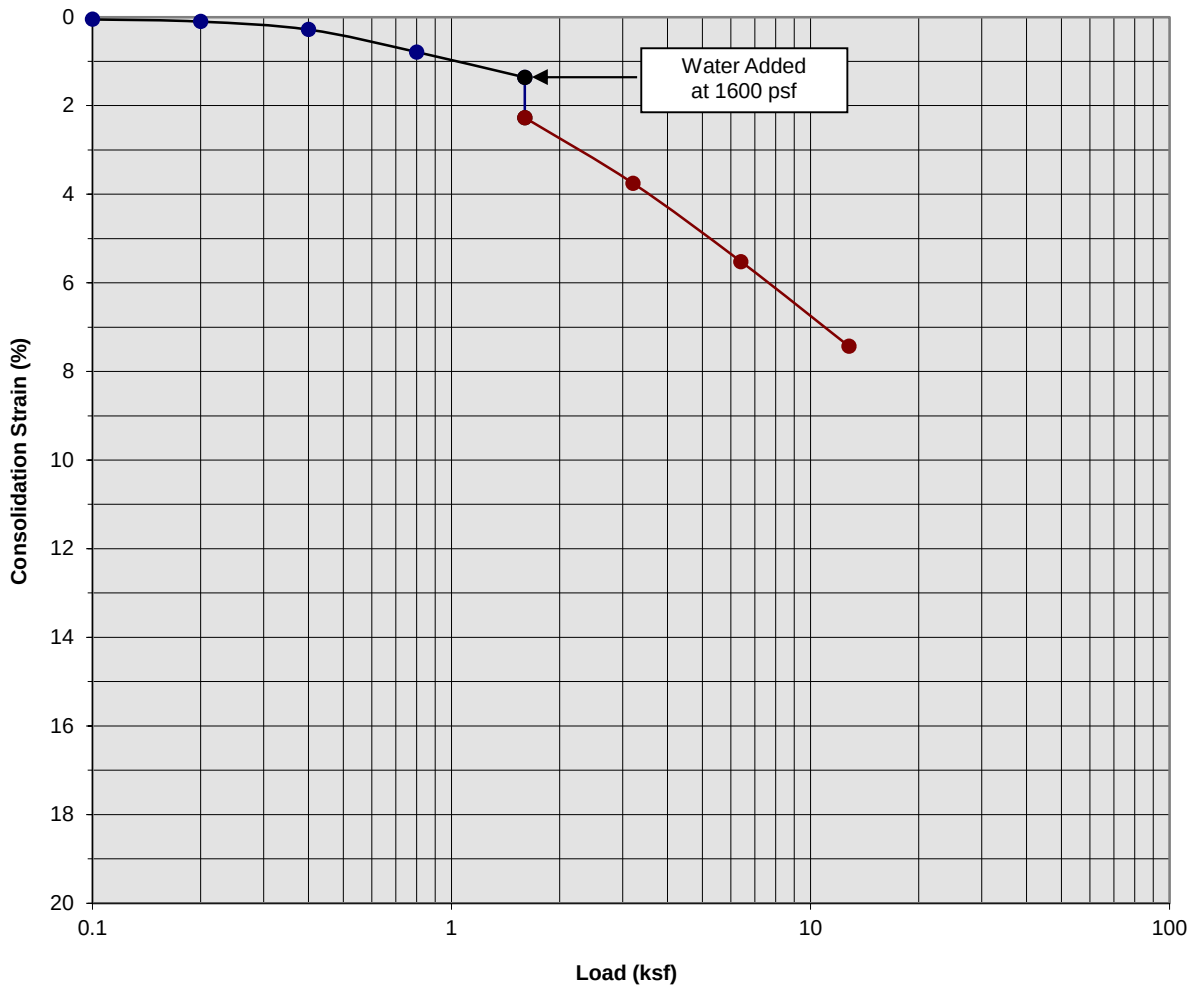
Boring Number:	B-5	Initial Moisture Content (%)	4
Sample Number:	---	Final Moisture Content (%)	12
Depth (ft)	5 to 6	Initial Dry Density (pcf)	115.2
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	135.7
Specimen Thickness (in)	1.0	Percent Collapse (%)	6.42

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to medium Sand, little coarse Sand, trace Clay, little Silt

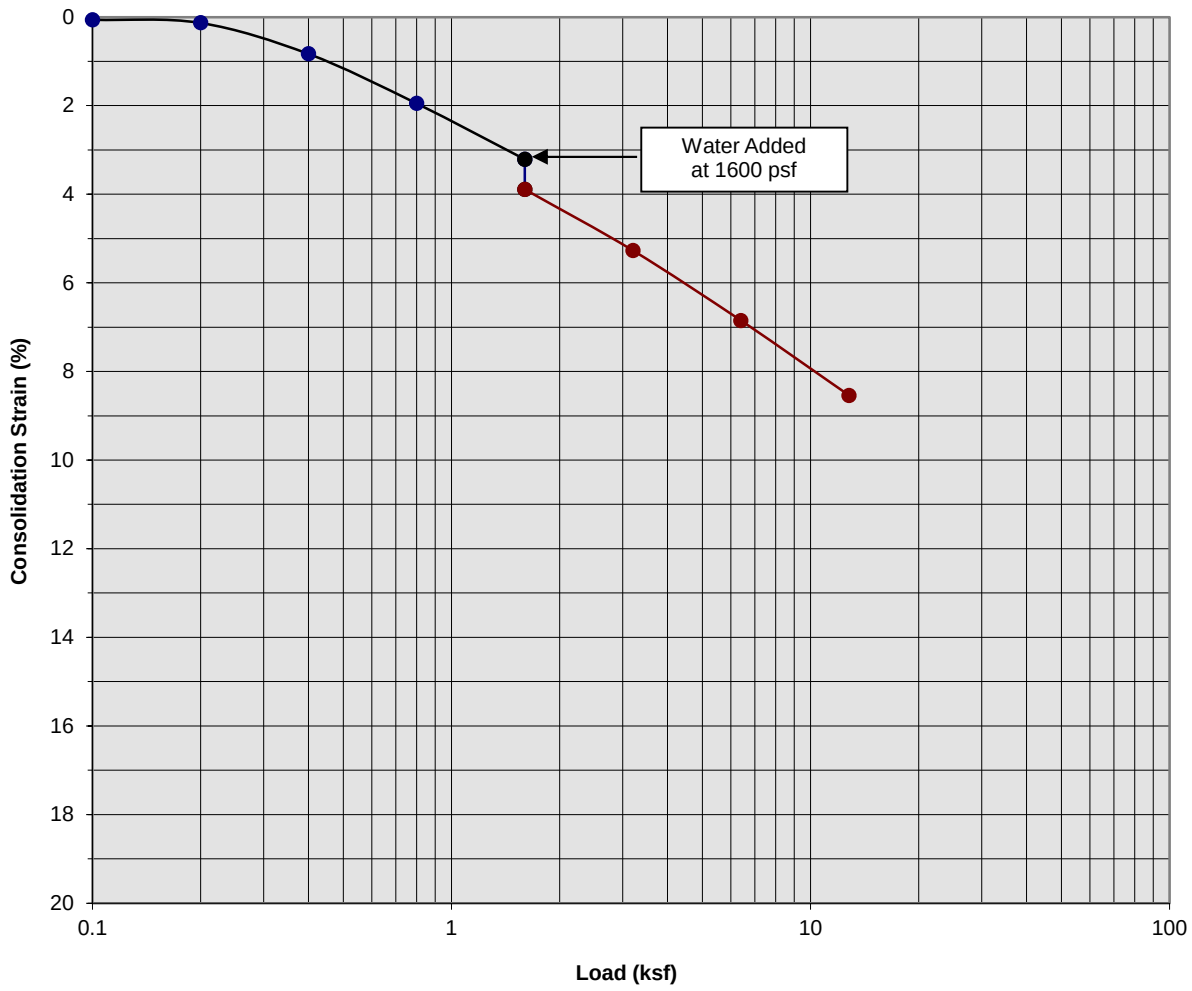
Boring Number:	B-5	Initial Moisture Content (%)	3
Sample Number:	---	Final Moisture Content (%)	14
Depth (ft)	7 to 8	Initial Dry Density (pcf)	112.0
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	120.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.91

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Consolidation/Collapse Test Results



Classification: Brown fine to medium Sand, little coarse Sand, trace Clay, little Silt

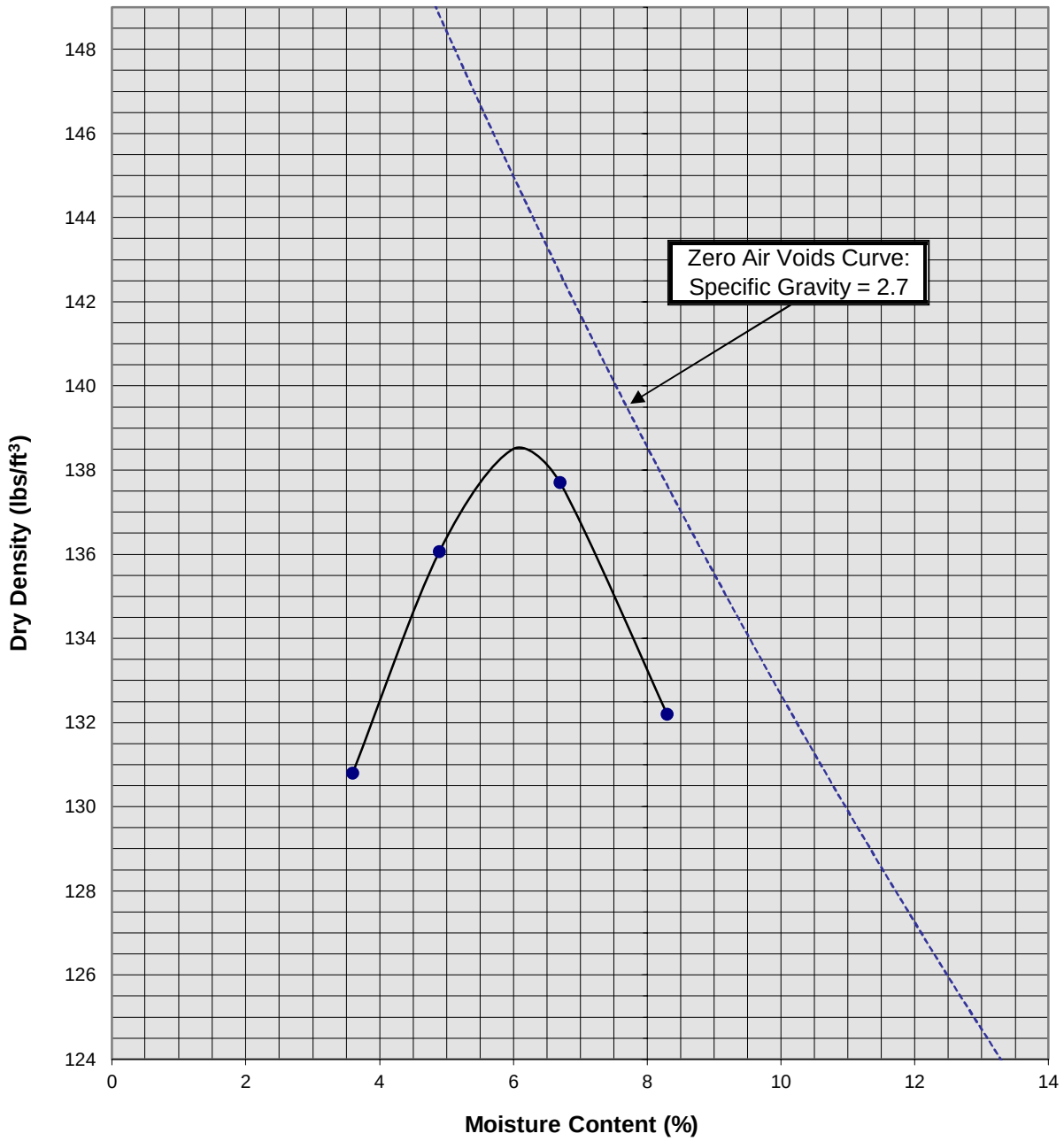
Boring Number:	B-5	Initial Moisture Content (%)	2
Sample Number:	---	Final Moisture Content (%)	14
Depth (ft)	9 to 10	Initial Dry Density (pcf)	114.7
Specimen Diameter (in)	2.4	Final Dry Density (pcf)	123.3
Specimen Thickness (in)	1.0	Percent Collapse (%)	0.68

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 7

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

Moisture/Density Relationship
ASTM D-1557

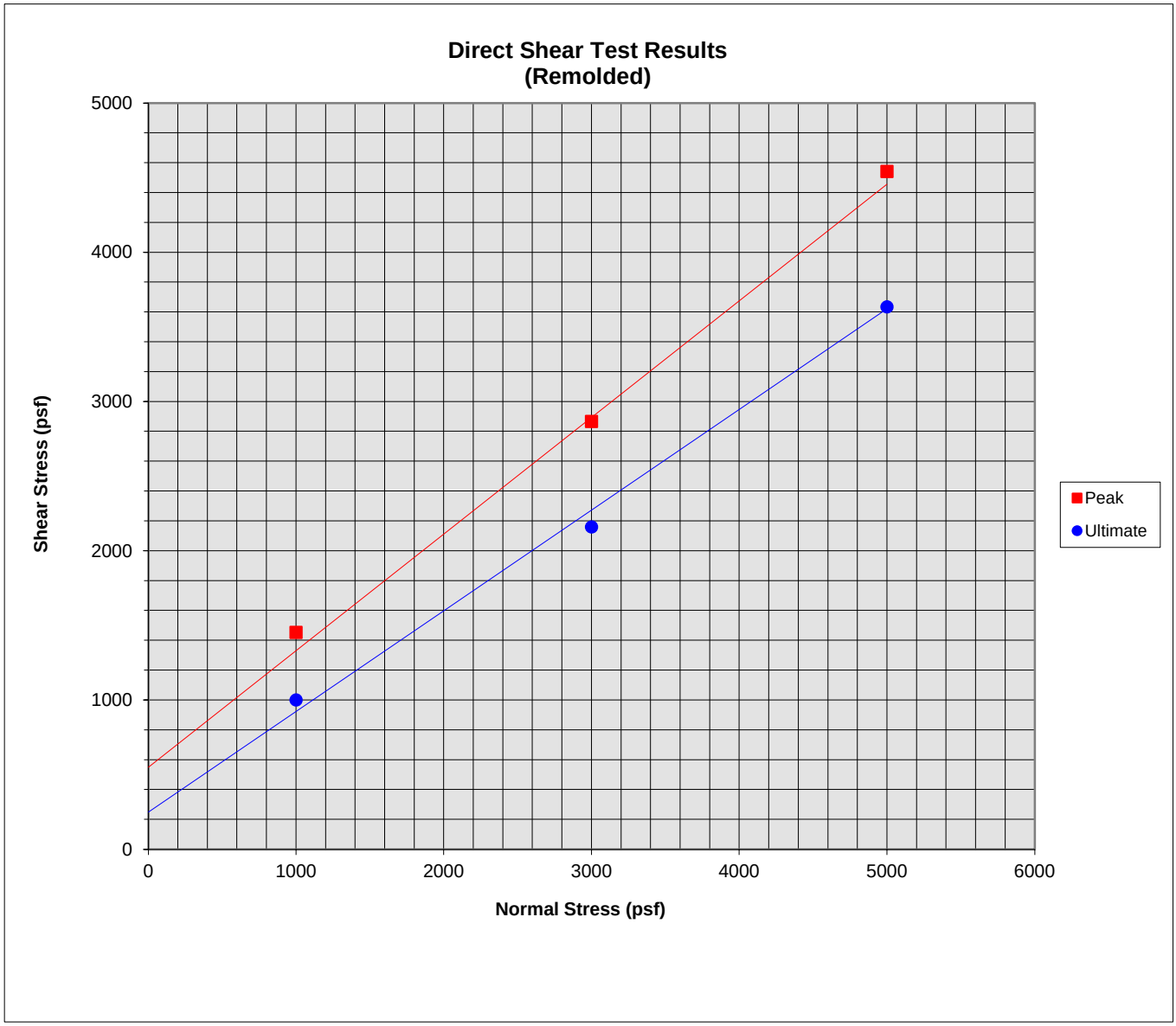


Soil ID Number	B-4 @ 0-5'
Optimum Moisture (%)	6
Maximum Dry Density (pcf)	138.5
Soil Classification	Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 8

SoCalGeo
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A California Corporation



Sample Description: B-4 @ 0 to 5'

Classification: Light Brown Silty fine to medium Sand, trace coarse Sand, trace fine Gravel

Sample Data	
Remolded Moisture Content	6.4
Final Moisture Content	12.0
Remolded Dry Density	124.7
Percent Compaction	90.0
Final Dry Density	----
Specimen Diameter (in)	2.4
Specimen Thickness (in)	1.0

Test Results	Peak	Ultimate
ϕ (°)	38.0	34.0
C (psf)	550	250

Proposed Warehouse
Hesperia, California
Project No. 22G203-1

PLATE C- 9

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

APPENDIX D

GRADING GUIDE SPECIFICATIONS

These grading guide specifications are intended to provide typical procedures for grading operations. They are intended to supplement the recommendations contained in the geotechnical investigation report for this project. Should the recommendations in the geotechnical investigation report conflict with the grading guide specifications, the more site specific recommendations in the geotechnical investigation report will govern.

General

- The Earthwork Contractor is responsible for the satisfactory completion of all earthwork in accordance with the plans and geotechnical reports, and in accordance with city, county, and applicable building codes.

- The Geotechnical Engineer is the representative of the Owner/Builder for the purpose of implementing the report recommendations and guidelines. These duties are not intended to relieve the Earthwork Contractor of any responsibility to perform in a workman-like manner, nor is the Geotechnical Engineer to direct the grading equipment or personnel employed by the Contractor.

- The Earthwork Contractor is required to notify the Geotechnical Engineer of the anticipated work and schedule so that testing and inspections can be provided. If necessary, work may be stopped and redone if personnel have not been scheduled in advance.

- The Earthwork Contractor is required to have suitable and sufficient equipment on the job-site to process, moisture condition, mix and compact the amount of fill being placed to the approved compaction. In addition, suitable support equipment should be available to conform with recommendations and guidelines in this report.

- Canyon cleanouts, overexcavation areas, processed ground to receive fill, key excavations, subdrains and benches should be observed by the Geotechnical Engineer prior to placement of any fill. It is the Earthwork Contractor's responsibility to notify the Geotechnical Engineer of areas that are ready for inspection.

- Excavation, filling, and subgrade preparation should be performed in a manner and sequence that will provide drainage at all times and proper control of erosion. Precipitation, springs, and seepage water encountered shall be pumped or drained to provide a suitable working surface. The Geotechnical Engineer must be informed of springs or water seepage encountered during grading or foundation construction for possible revision to the recommended construction procedures and/or installation of subdrains.

Site Preparation

- The Earthwork Contractor is responsible for all clearing, grubbing, stripping and site preparation for the project in accordance with the recommendations of the Geotechnical Engineer.

- If any materials or areas are encountered by the Earthwork Contractor which are suspected of having toxic or environmentally sensitive contamination, the Geotechnical Engineer and Owner/Builder should be notified immediately.

- Major vegetation should be stripped and disposed of off-site. This includes trees, brush, heavy grasses and any materials considered unsuitable by the Geotechnical Engineer.

- Underground structures such as basements, cesspools or septic disposal systems, mining shafts, tunnels, wells and pipelines should be removed under the inspection of the Geotechnical Engineer and recommendations provided by the Geotechnical Engineer and/or city, county or state agencies. If such structures are known or found, the Geotechnical Engineer should be notified as soon as possible so that recommendations can be formulated.

- Any topsoil, slopewash, colluvium, alluvium and rock materials which are considered unsuitable by the Geotechnical Engineer should be removed prior to fill placement.

- Remaining voids created during site clearing caused by removal of trees, foundations basements, irrigation facilities, etc., should be excavated and filled with compacted fill.

- Subsequent to clearing and removals, areas to receive fill should be scarified to a depth of 10 to 12 inches, moisture conditioned and compacted

- The moisture condition of the processed ground should be at or slightly above the optimum moisture content as determined by the Geotechnical Engineer. Depending upon field conditions, this may require air drying or watering together with mixing and/or discing.

Compacted Fills

- Soil materials imported to or excavated on the property may be utilized in the fill, provided each material has been determined to be suitable in the opinion of the Geotechnical Engineer. Unless otherwise approved by the Geotechnical Engineer, all fill materials shall be free of deleterious, organic, or frozen matter, shall contain no chemicals that may result in the material being classified as "contaminated," and shall be very low to non-expansive with a maximum expansion index (EI) of 50. The top 12 inches of the compacted fill should have a maximum particle size of 3 inches, and all underlying compacted fill material a maximum 6-inch particle size, except as noted below.

- All soils should be evaluated and tested by the Geotechnical Engineer. Materials with high expansion potential, low strength, poor gradation or containing organic materials may require removal from the site or selective placement and/or mixing to the satisfaction of the Geotechnical Engineer.

- Rock fragments or rocks less than 6 inches in their largest dimensions, or as otherwise determined by the Geotechnical Engineer, may be used in compacted fill, provided the distribution and placement is satisfactory in the opinion of the Geotechnical Engineer.

- Rock fragments or rocks greater than 12 inches should be taken off-site or placed in accordance with recommendations and in areas designated as suitable by the Geotechnical Engineer. These materials should be placed in accordance with Plate D-8 of these Grading Guide Specifications and in accordance with the following recommendations:

    - Rocks 12 inches or more in diameter should be placed in rows at least 15 feet apart, 15 feet from the edge of the fill, and 10 feet or more below subgrade. Spaces should be left between each rock fragment to provide for placement and compaction of soil around the fragments.

    - Fill materials consisting of soil meeting the minimum moisture content requirements and free of oversize material should be placed between and over the rows of rock or

concrete. Ample water and compactive effort should be applied to the fill materials as they are placed in order that all of the voids between each of the fragments are filled and compacted to the specified density.

- Subsequent rows of rocks should be placed such that they are not directly above a row placed in the previous lift of fill. A minimum 5-foot offset between rows is recommended.

- To facilitate future trenching, oversized material should not be placed within the range of foundation excavations, future utilities or other underground construction unless specifically approved by the soil engineer and the developer/owner representative.

- Fill materials approved by the Geotechnical Engineer should be placed in areas previously prepared to receive fill and in evenly placed, near horizontal layers at about 6 to 8 inches in loose thickness, or as otherwise determined by the Geotechnical Engineer for the project.

- Each layer should be moisture conditioned to optimum moisture content, or slightly above, as directed by the Geotechnical Engineer. After proper mixing and/or drying, to evenly distribute the moisture, the layers should be compacted to at least 90 percent of the maximum dry density in compliance with ASTM D-1557-78 unless otherwise indicated.

- Density and moisture content testing should be performed by the Geotechnical Engineer at random intervals and locations as determined by the Geotechnical Engineer. These tests are intended as an aid to the Earthwork Contractor, so he can evaluate his workmanship, equipment effectiveness and site conditions. The Earthwork Contractor is responsible for compaction as required by the Geotechnical Report(s) and governmental agencies.

- Fill areas unused for a period of time may require moisture conditioning, processing and recompaction prior to the start of additional filling. The Earthwork Contractor should notify the Geotechnical Engineer of his intent so that an evaluation can be made.

- Fill placed on ground sloping at a 5-to-1 inclination (horizontal-to-vertical) or steeper should be benched into bedrock or other suitable materials, as directed by the Geotechnical Engineer. Typical details of benching are illustrated on Plates D-2, D-4, and D-5.

- Cut/fill transition lots should have the cut portion overexcavated to a depth of at least 3 feet and rebuilt with fill (see Plate D-1), as determined by the Geotechnical Engineer.

- All cut lots should be inspected by the Geotechnical Engineer for fracturing and other bedrock conditions. If necessary, the pads should be overexcavated to a depth of 3 feet and rebuilt with a uniform, more cohesive soil type to impede moisture penetration.

- Cut portions of pad areas above buttresses or stabilizations should be overexcavated to a depth of 3 feet and rebuilt with uniform, more cohesive compacted fill to impede moisture penetration.

- Non-structural fill adjacent to structural fill should typically be placed in unison to provide lateral support. Backfill along walls must be placed and compacted with care to ensure that excessive unbalanced lateral pressures do not develop. The type of fill material placed adjacent to below grade walls must be properly tested and approved by the Geotechnical Engineer with consideration of the lateral earth pressure used in the design.

Foundations

- The foundation influence zone is defined as extending one foot horizontally from the outside edge of a footing, and proceeding downward at a ½ horizontal to 1 vertical (0.5:1) inclination.

- Where overexcavation beneath a footing subgrade is necessary, it should be conducted so as to encompass the entire foundation influence zone, as described above.

- Compacted fill adjacent to exterior footings should extend at least 12 inches above foundation bearing grade. Compacted fill within the interior of structures should extend to the floor subgrade elevation.

Fill Slopes

- The placement and compaction of fill described above applies to all fill slopes. Slope compaction should be accomplished by overfilling the slope, adequately compacting the fill in even layers, including the overfilled zone and cutting the slope back to expose the compacted core

- Slope compaction may also be achieved by backrolling the slope adequately every 2 to 4 vertical feet during the filling process as well as requiring the earth moving and compaction equipment to work close to the top of the slope. Upon completion of slope construction, the slope face should be compacted with a sheepsfoot connected to a sideboom and then grid rolled. This method of slope compaction should only be used if approved by the Geotechnical Engineer.

- Sandy soils lacking in adequate cohesion may be unstable for a finished slope condition and therefore should not be placed within 15 horizontal feet of the slope face.

- All fill slopes should be keyed into bedrock or other suitable material. Fill keys should be at least 15 feet wide and inclined at 2 percent into the slope. For slopes higher than 30 feet, the fill key width should be equal to one-half the height of the slope (see Plate D-5).

- All fill keys should be cleared of loose slough material prior to geotechnical inspection and should be approved by the Geotechnical Engineer and governmental agencies prior to filling.

- The cut portion of fill over cut slopes should be made first and inspected by the Geotechnical Engineer for possible stabilization requirements. The fill portion should be adequately keyed through all surficial soils and into bedrock or suitable material. Soils should be removed from the transition zone between the cut and fill portions (see Plate D-2).

Cut Slopes

- All cut slopes should be inspected by the Geotechnical Engineer to determine the need for stabilization. The Earthwork Contractor should notify the Geotechnical Engineer when slope cutting is in progress at intervals of 10 vertical feet. Failure to notify may result in a delay in recommendations.

- Cut slopes exposing loose, cohesionless sands should be reported to the Geotechnical Engineer for possible stabilization recommendations.

- All stabilization excavations should be cleared of loose slough material prior to geotechnical inspection. Stakes should be provided by the Civil Engineer to verify the location and dimensions of the key. A typical stabilization fill detail is shown on Plate D-5.

- Stabilization key excavations should be provided with subdrains. Typical subdrain details are shown on Plates D-6.

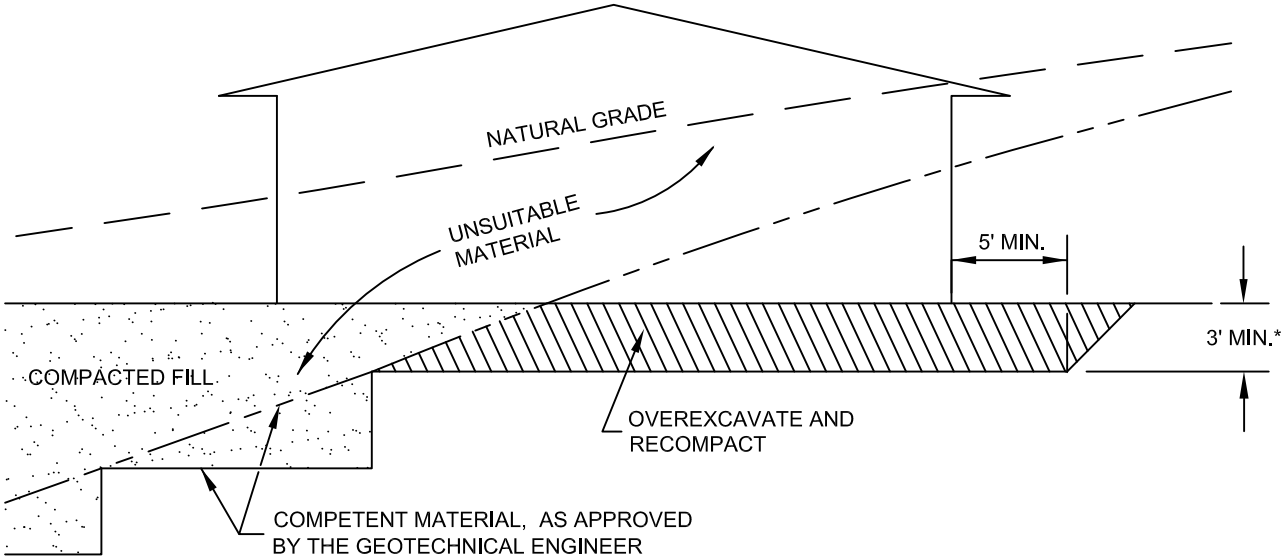
Subdrains

- Subdrains may be required in canyons and swales where fill placement is proposed. Typical subdrain details for canyons are shown on Plate D-3. Subdrains should be installed after approval of removals and before filling, as determined by the Soils Engineer.

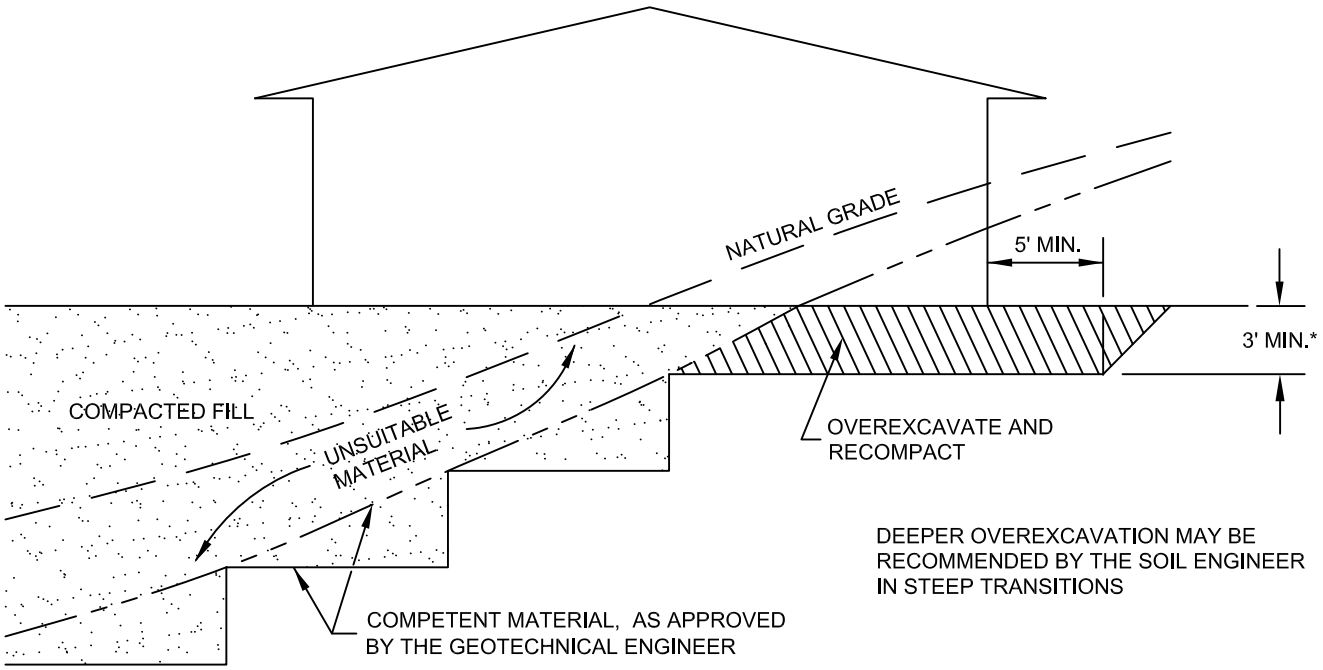
- Plastic pipe may be used for subdrains provided it is Schedule 40 or SDR 35 or equivalent. Pipe should be protected against breakage, typically by placement in a square-cut (backhoe) trench or as recommended by the manufacturer.

- Filter material for subdrains should conform to CALTRANS Specification 68-1.025 or as approved by the Geotechnical Engineer for the specific site conditions. Clean ¾-inch crushed rock may be used provided it is wrapped in an acceptable filter cloth and approved by the Geotechnical Engineer. Pipe diameters should be 6 inches for runs up to 500 feet and 8 inches for the downstream continuations of longer runs. Four-inch diameter pipe may be used in buttress and stabilization fills.

CUT LOT



CUT/FILL LOT (TRANSITION)



*SEE TEXT OF REPORT FOR SPECIFIC RECOMMENDATION. ACTUAL DEPTH OF OVEREXCAVATION MAY BE GREATER.

TRANSITION LOT DETAIL

GRADING GUIDE SPECIFICATIONS

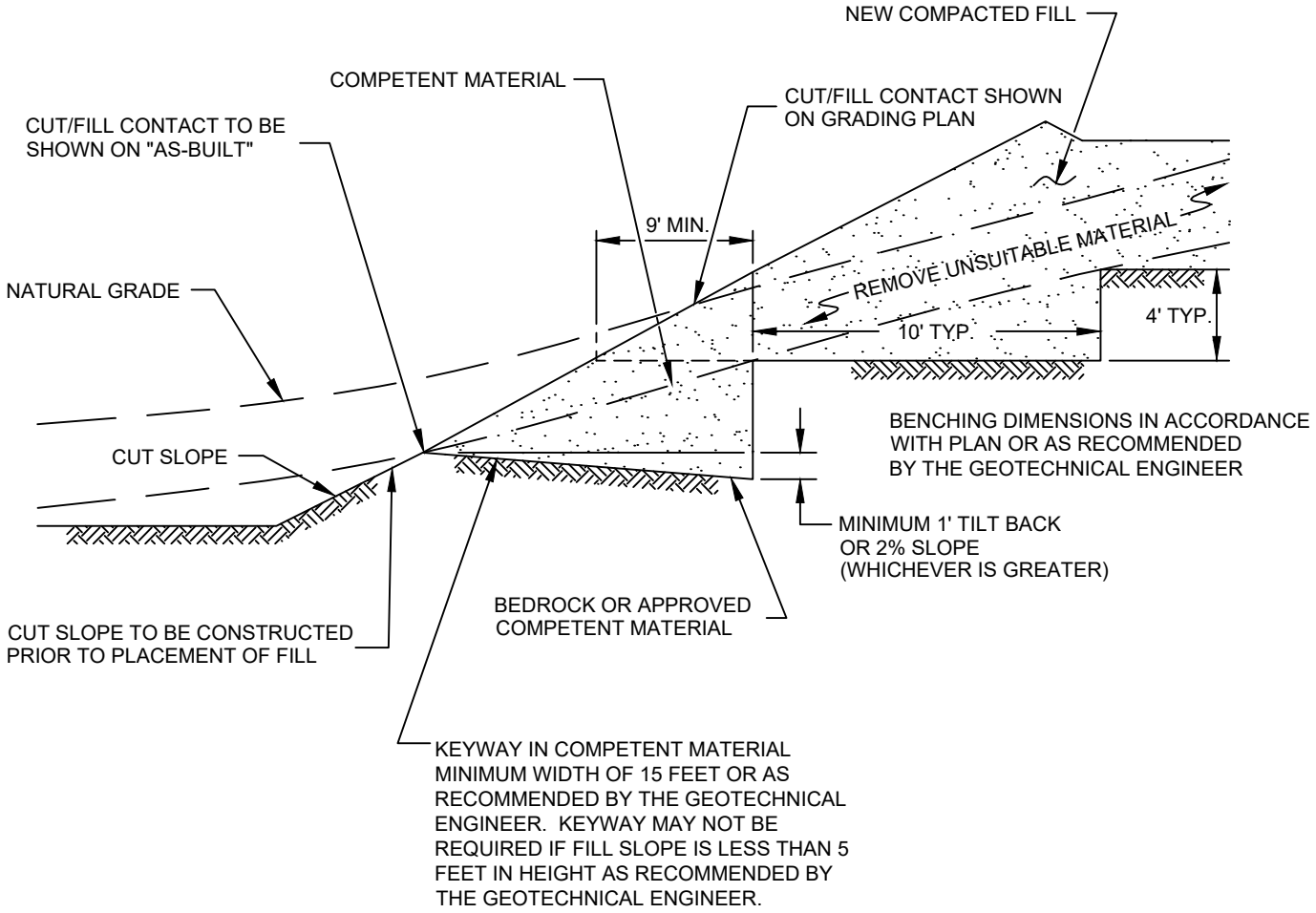
NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-1

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



FILL ABOVE CUT SLOPE DETAIL

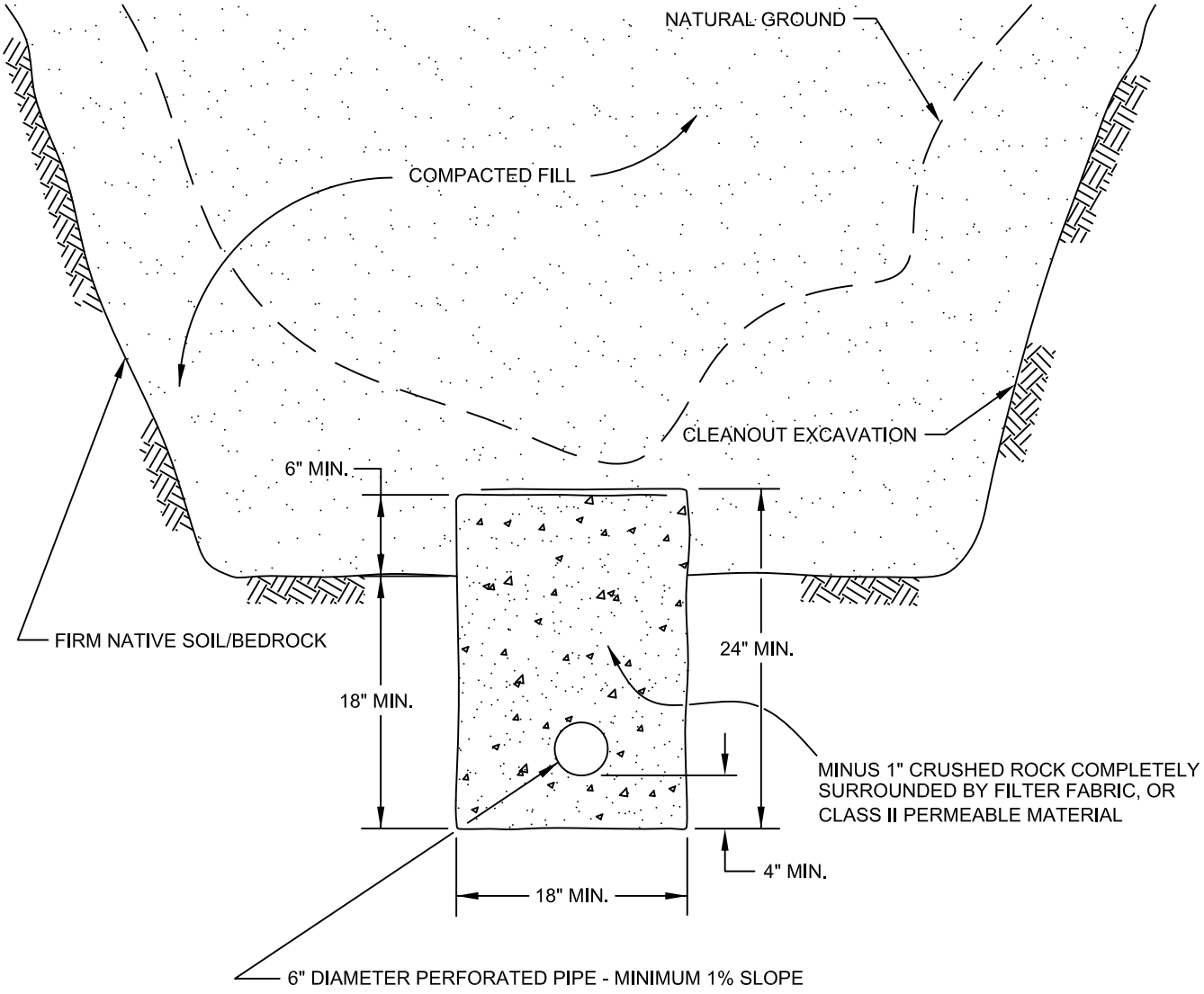
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-2

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



PIPE MATERIAL	DEPTH OF FILL OVER SUBDRAIN
ADS (CORRUGATED POLETHYLENE)	8
TRANSITE UNDERDRAIN	20
PVC OR ABS: SDR 35	35
SDR 21	100

SCHEMATIC ONLY
NOT TO SCALE

CANYON SUBDRAIN DETAIL

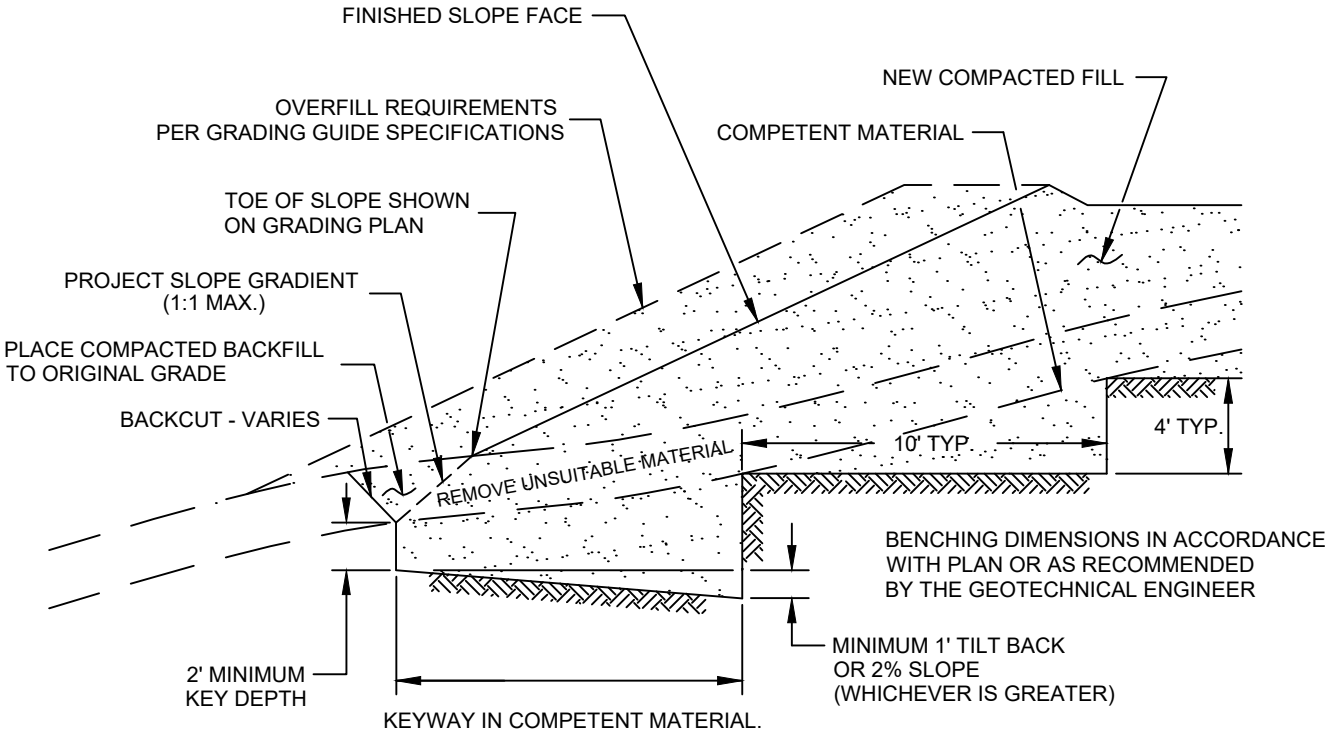
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-3

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



NOTE:
BENCHING SHALL BE REQUIRED WHEN NATURAL SLOPES ARE EQUAL TO OR STEEPER THAN 5:1 OR WHEN RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

FILL ABOVE NATURAL SLOPE DETAIL

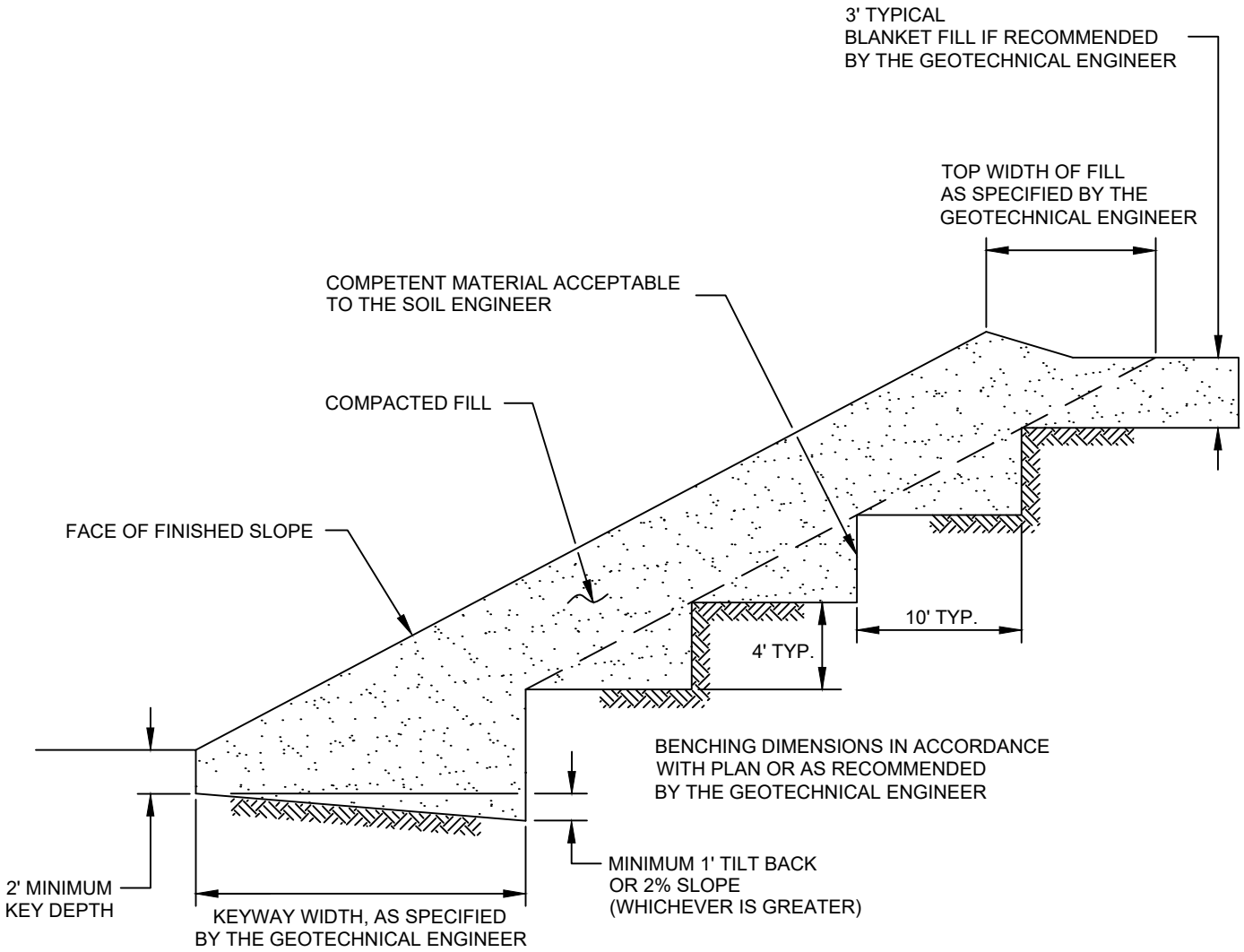
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-4

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



STABILIZATION FILL DETAIL

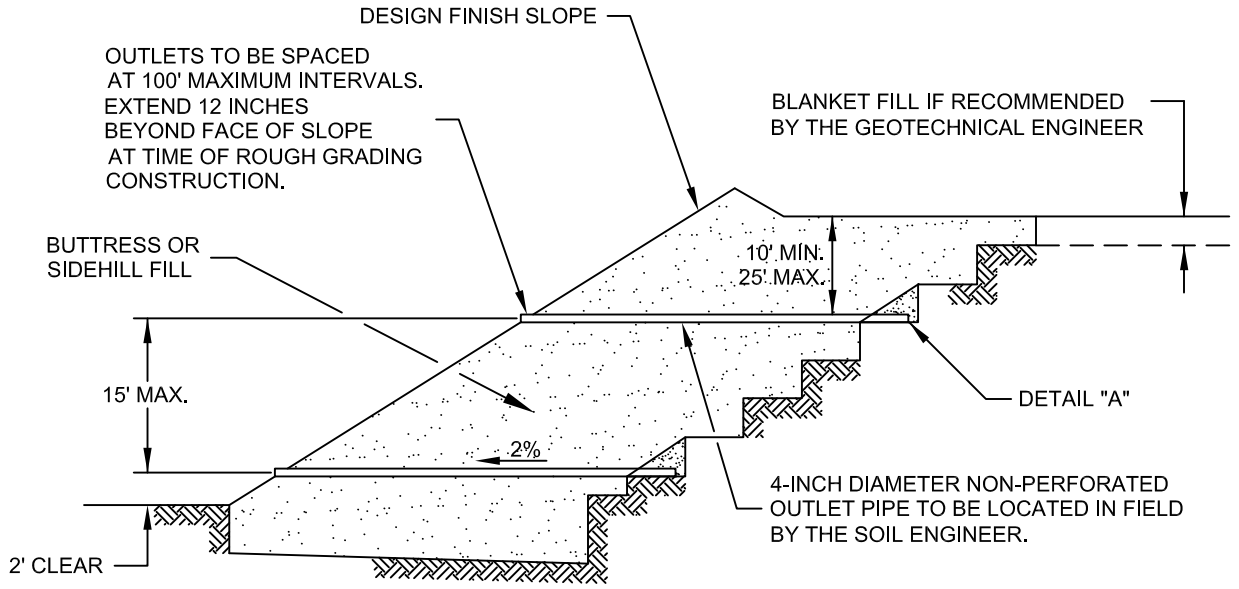
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-5

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



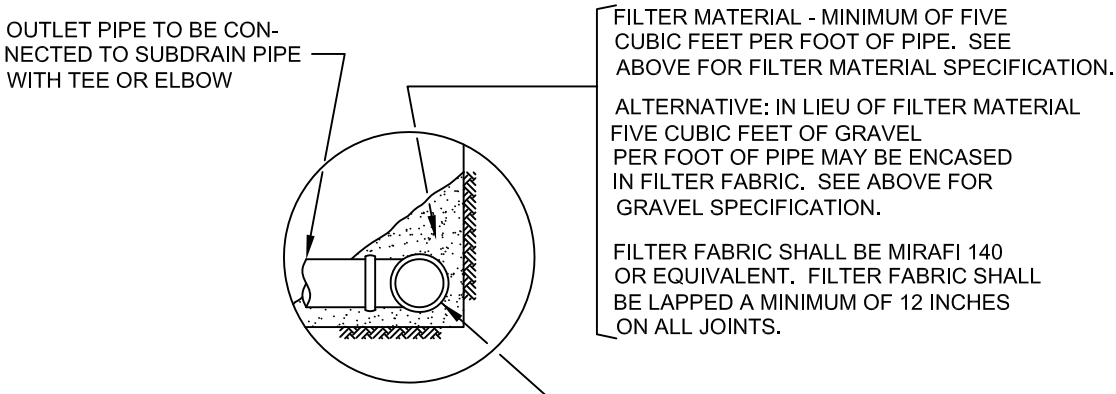
"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50



DETAIL "A"

NOTES:
1. TRENCH FOR OUTLET PIPES TO BE BACKFILLED WITH ON-SITE SOIL.

SLOPE FILL SUBDRAINS

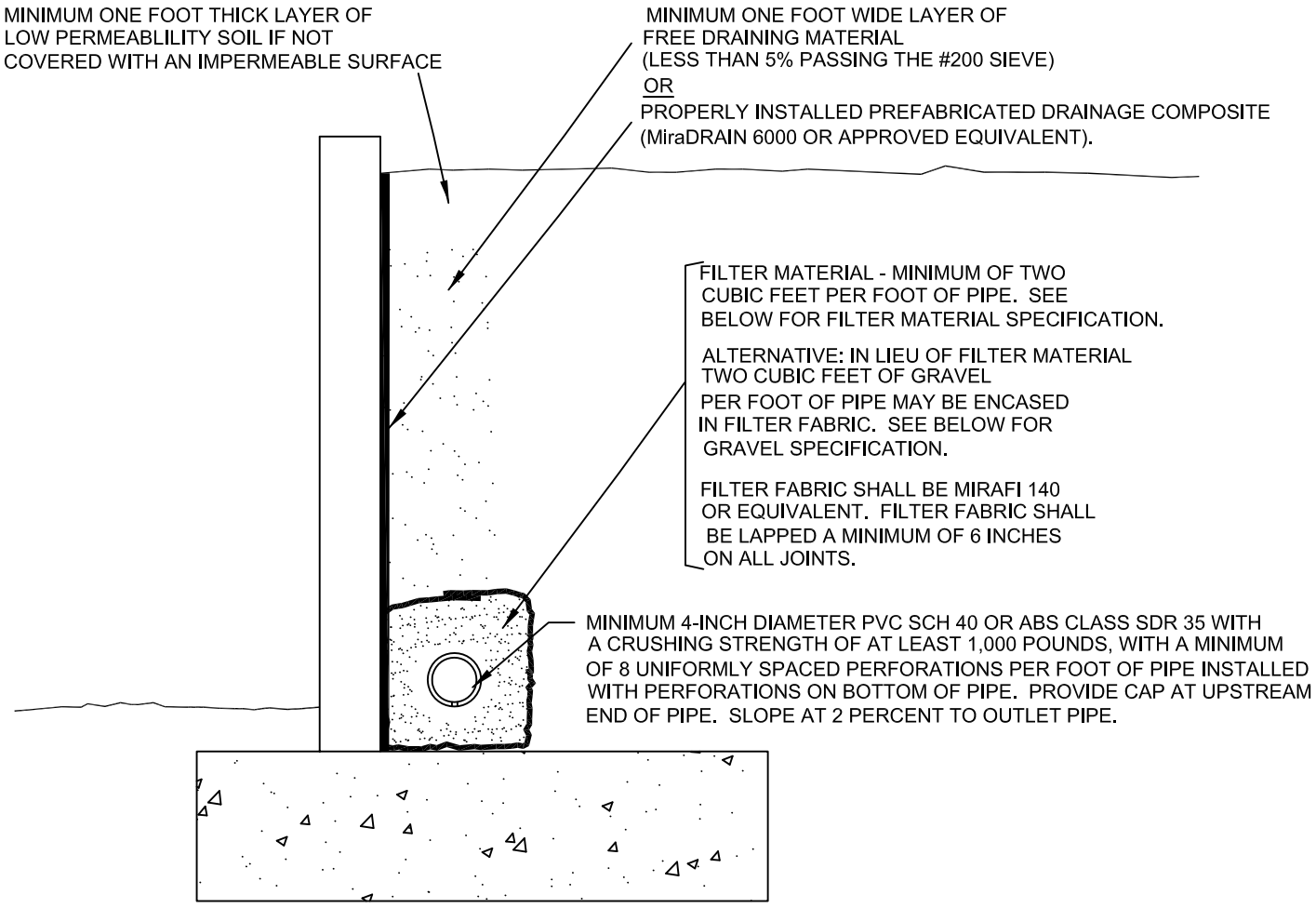
GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: JAS
CHKD: GKM

PLATE D-6

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL



"FILTER MATERIAL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT: (CONFORMS TO EMA STD. PLAN 323)

SIEVE SIZE	PERCENTAGE PASSING
1"	100
3/4"	90-100
3/8"	40-100
NO. 4	25-40
NO. 8	18-33
NO. 30	5-15
NO. 50	0-7
NO. 200	0-3

"GRAVEL" TO MEET FOLLOWING SPECIFICATION OR APPROVED EQUIVALENT:

SIEVE SIZE	MAXIMUM PERCENTAGE PASSING
1 1/2"	100
NO. 4	50
NO. 200	8

SAND EQUIVALENT = MINIMUM OF 50

RETAINING WALL BACKDRAINS

GRADING GUIDE SPECIFICATIONS

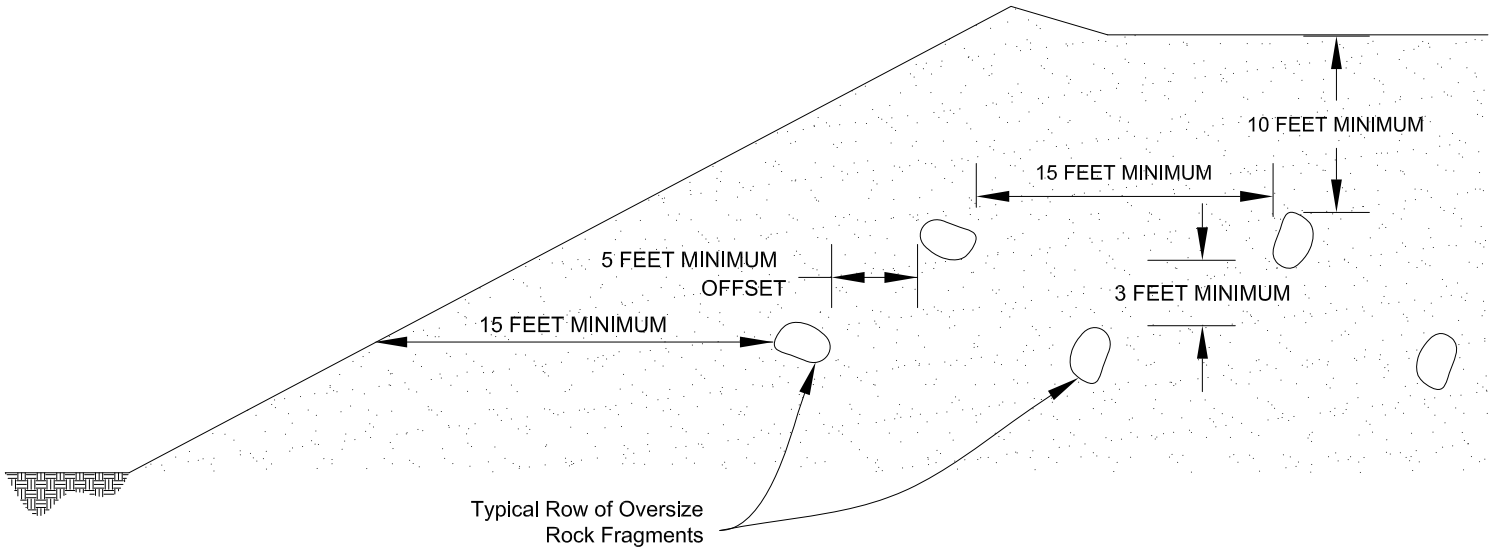
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CHKD: GKM

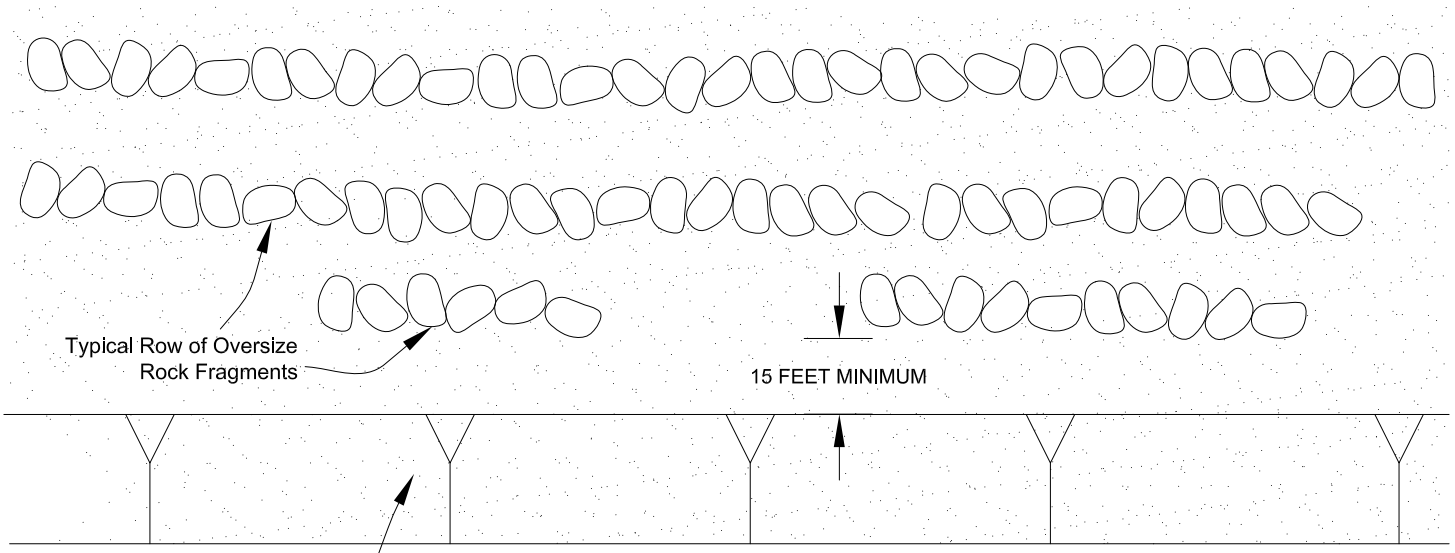
PLATE D-7

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL



Section View



Plan View

PLACEMENT OF OVERSIZED MATERIAL

GRADING GUIDE SPECIFICATIONS

NOT TO SCALE

DRAWN: PM
CHKD: GKM

PLATE D-8

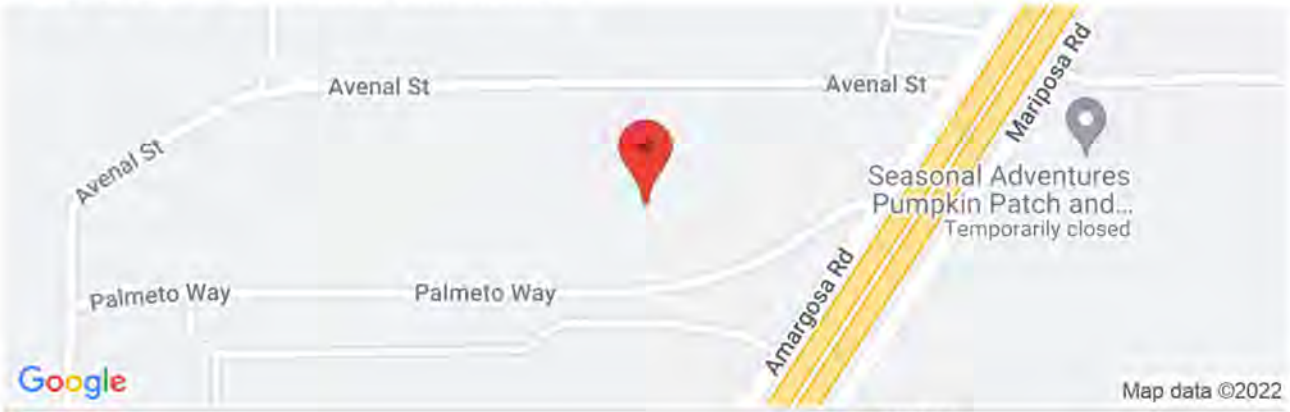
SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX E

OSHPD

Latitude, Longitude: 34.43653616, -117.37565949



Date	6/17/2022, 2:31:07 PM
Design Code Reference Document	ASCE7-16
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.466	MCE_R ground motion. (for 0.2 second period)
S_1	0.569	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.466	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	0.978	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.5	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.55	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	1.466	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.581	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
S1RT	0.569	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.627	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.928	Mapped value of the risk coefficient at short periods
C_{R1}	0.907	Mapped value of the risk coefficient at a period of 1 s

SOURCE: SEAOC/OSHPD Seismic Design Maps Tool
<https://seismicmaps.org/>

SEISMIC DESIGN PARAMETERS - 2019 CBC

PROPOSED WAREHOUSE

HESPERIA, CALIFORNIA

DRAWN: JJH
CHKD: JJL

SCG PROJECT
22G203-1

PLATE E-1

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

APPENDIX G
Amargosa and Palmetto High-Cube Warehouse Greenhouse Gas Analysis

Amargosa and Palmetto High-Cube Warehouse

GREENHOUSE GAS ANALYSIS

CITY OF HESPERIA

PREPARED BY:

Haseeb Qureshi
hqureshi@urbanxroads.com

Ali Dadabhoy
adadabhoy@urbanxroads.com

FEBRUARY 1, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
%	Percent
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AB 1493	Pavley Fuel Efficiency Standards
AB 1881	California Water Conservation in Landscaping Act of 2006
APA	Administrative Procedure Act
AQIA	Air Quality Impact Analysis
BAU	Business As Usual
BSC	Building Standards Commission
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model™
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	Californina Green Building Standards Code
CalRecycle	California's Department of Resources Recycling and Recovery
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CCR	California Code of Regulations
CDFA	California Department of Food and Agriculture
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	Chlorofluorocarbons
CH_4	Methane
CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Convention	United Nations Framework Convention on Climate Change
COP	UNCFCC Conference of the Parties
CPUC	California Public Utilities Commission

CTC	California Transportation Commission
DOF	Department of Finance
EPA	Environmental Protection Agency
FED	Functional Equivelent Document
GCC	Global Climate Change
Gg	Gigagram
GHG	Greenhouse Gas
GHGA	Greenhouse Gas Analysis
Gpd/acre	Gallons per Day per Acre
GO-Biz	Governor's Office of Business and Economic Development
GWP	Global Warming Potential
H_2O	Water Vapor
HD	Heavy-Duty
HFC	Hydrofluorocarbons
IBank	California Infrastructure and Economic Development Bank
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
LBNL	Lawrence Berkeley National Laboratory
LCA	Life-Cycle Analysis
LCFS	Low Carbon Fuel Standard
MD	Medium-Duty
MDAQMD	Mojave Desert Air Quality Management District
MMT	Million Metric Tons
$MMTCO_2e$	Million Metric Ton of Carbon Dioxide Equivalent
MPG	Miles Per Gallon
MT	Metric Tons
MT/yr	Metric Tons per Year
$MTCO_2e$	Metric Ton of Carbon Dioxide Equivalent
MY	Model Year
N_20	Nitrogen Dioxide
NDC	Nationally Determined Contributions
NHTSA	National Highway Traffic Safety Administration
NO_X	Oxides of Nitrogen
NF_3	Nitrogen Trifluoride
OAL	Office of Administrative Law
Ordinance	Model Water Efficient Landscape Ordinance
OPR	Govenor's Office of Planning and Research
PFC	Perfluorocarbons

PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
ppb	Parts Per Billion
ppm	Parts Per Million
ppt	Parts Per Trillion
Project	Amargosa and Palmetto High-Cube Warehouse
PSD	Prevention Significant Deterioration
RPS	Renewables Portfolio Standard
SB	Senate Bill
SB 32	Senate Bill 32
SB 375	Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies
SCAQMD	South Coast Air Quality Management District
Scoping Plan	CARB's Climate Change Scoping Plan
sf	Square Feet
SF_6	Sulfur Hexafluoride
SGC	Strategic Growth Council
SLPS	Short-Lived Climate Pollutant Strategy
SO_X	Oxides of Sulfur
SWRCB	California State Water Resources Control Board
tpy	Tons Per Year
TSF	Thousand Square Feet
UNFCCC	United Nations' Framework Convention on Climate Change
Update	CARB approved First Updated to the Scoping Plan
VMT	Vehicle-Miles Traveled
VOC	Volatile Organic Compounds
ZE/NZE	Zero- and near-zero-emission
ZEV	Zero Emission Vehicle

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Amargosa and Palmetto High-Cube Warehouse Greenhouse Gas Analysis* (GHGA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: The Project would not generate direct or indirect GHG emission that would result in a significant impact on the environment.	3.8	*Less Than Significant*	*n/a*
GHG Impact #2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	3.8	*Less Than Significant*	*n/a*

ES.2 REGULATORY REQUIREMENTS

The Project would be required to comply with all mandates imposed by the State of California and the Mojave Desert Air Quality Management District (MDAQMD). Those that are applicable to the Project and that would assist in the reduction of GHG emissions are:

- Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill (SB) 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations (CCR)) and CALGreen standards. Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10 percent (%) less by 2020 (7).

- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010, to ensure efficient landscapes in new development and reduced water waste in existing landscapes (8).
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).
- Renewable Portfolio Standards (SB 1078 – also referred to as RPS). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20% by 2010 and 33% by 2020 (10).
- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (11).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS, are accounted for in the Project's emission calculations.

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1 INTRODUCTION

This report presents the results of the GHGA prepared by Urban Crossroads, Inc., for the Amargosa and Palmetto High-Cube Warehouse (Project).

The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the Project.

1.1 SITE LOCATION

The proposed Project is located on the northwest corner of Amargosa Road, and Palmetto Way in the City of Hesperia as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,850[1] square high-cube fulfillment center warehouse building as shown on Exhibit 1-B. The proposed project is anticipated to be constructed and fully operational by year 2024.

The on-site Project-related emission sources are expected to include loading dock activity and entry gate & truck movements. This study evaluates GHG emissions impacts associated with the expected typical operational activities at the Project site. To present a conservative approach, this study assumes the Project will operate 24-hours daily for seven days per week.

1 The proposed building square footage utilized in this analysis is based on a previous site plan which assumed a slightly smaller building square footage. Nonetheless, the emissions analyzed in this report would not change and a less than significant impact is expected.

EXHIBIT 1-A: LOCATION MAP

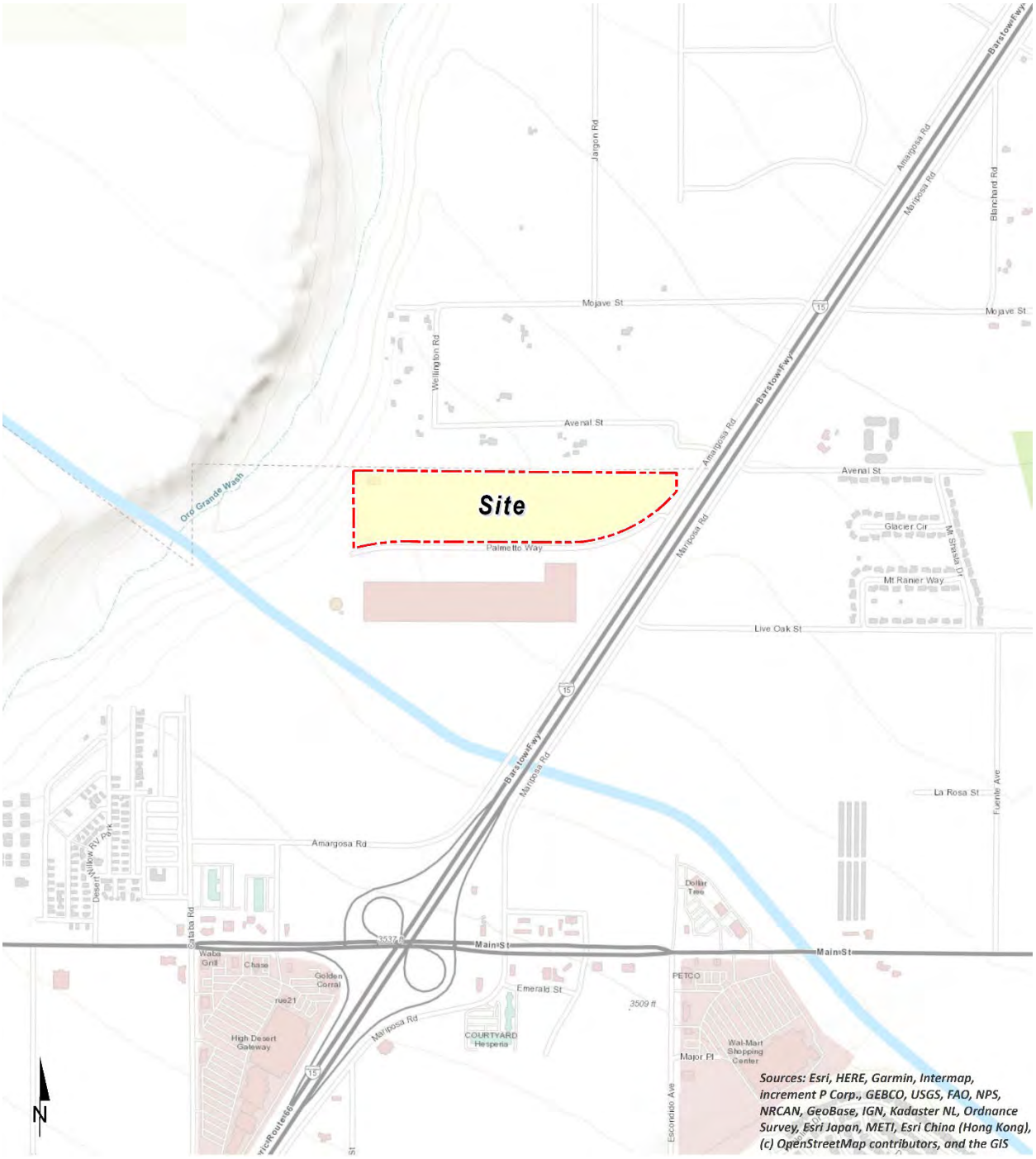
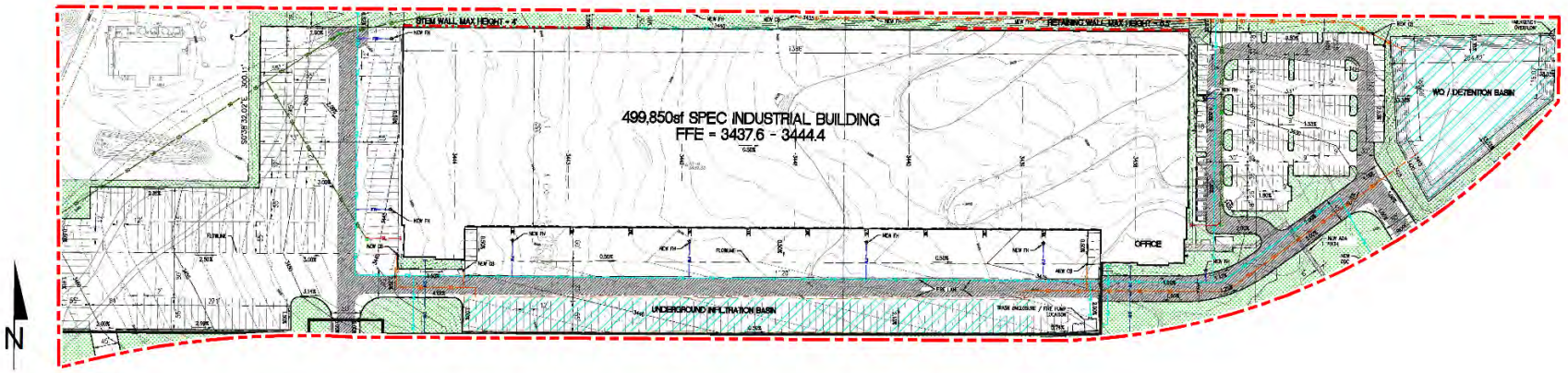


EXHIBIT 1-B: SITE PLAN



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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE

GCC is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual development proposal like the Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GHGS

2.3.1 GHGS AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated (see Table 3-1 later in this report) because these gases are the primary contributors to GCC from development projects.

Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GHGS

GHGs	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

GHGs	Description	Sources	Health Effects
	unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (12).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (13).	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (14).	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15-minute period (15).

GHGs	Description	Sources	Health Effects
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning (16).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to high levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (17).

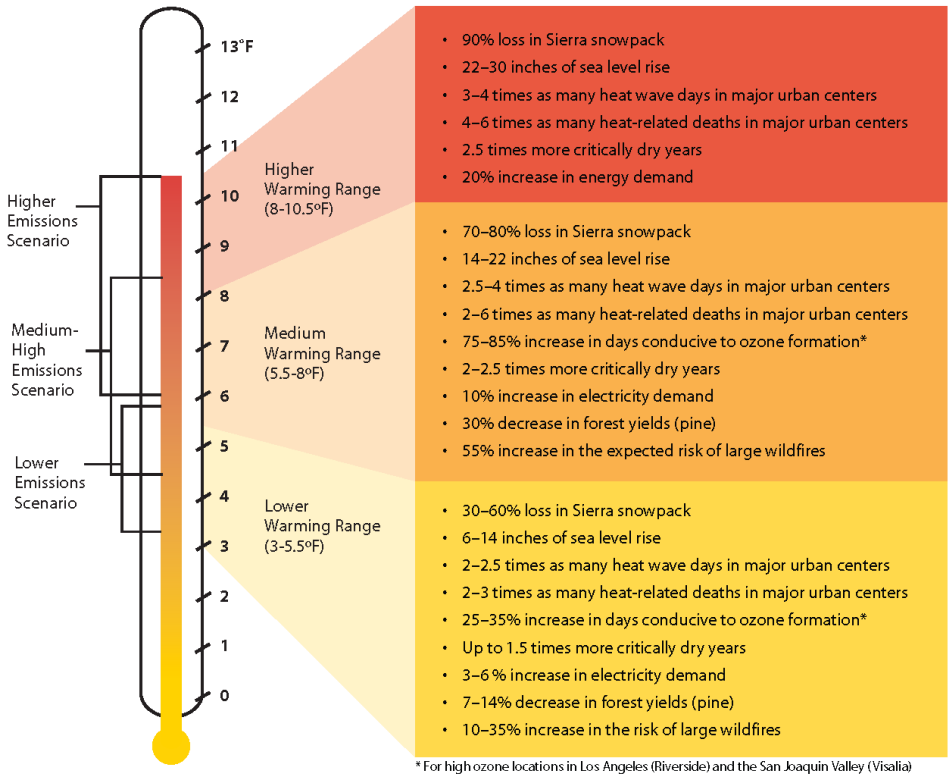
GHGs	Description	Sources	Health Effects
		used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (17).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years (18).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

GHGs	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (19). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

GHGs	Description	Sources	Health Effects
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200 (20).	NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (21).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (22). Exhibit 2-A presents the potential impacts of global warming (23).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas causes over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the difference GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the 2nd Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO_2 to 23,900 for SF_6 and GWP for the IPCC's 5th Assessment Report range from 1 for CO_2 to 23,500 for SF_6 (24).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)		
		2nd Assessment Report	4th Assessment Report	5th Assessment Report
CO_2	See*	1	1	1
CH_4	12 .4	21	25	28
N_2O	121	310	298	265
HFC-23	222	11,700	14,800	12,400
HFC-134a	13.4	1,300	1,430	1,300
HFC-152a	1.5	140	124	138
SF_6	3,200	23,900	22,800	23,500
NF_3	740	-	17,200	16,100

*As per Appendix 8.A. of IPCC's 5th Assessment Report, no single lifetime can be given.
Source: IPCC Fourth Assessment Report: https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html
IPCC Fifth Assessment Report: https://www.ipcc.ch/pdf/assessmentreport/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf

2.5 GHG EMISSIONS INVENTORIES

2.5.1 GLOBAL

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2017. Based on the latest available data, the sum of these emissions totaled approximately 29,216,501 gigagram (Gg) CO_2e[2] (25) (26) as summarized on Table 2-3.

[2] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2017 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used U.N. Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014.

2.5.2 UNITED STATES

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2017.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION [3]

Emitting Countries	GHG Emissions (Gg CO_2e)
China	11,911,710
United States	6,456,718
European Union (28-member countries)	4,323,163
India	3,079,810
Russian Federation	2,155,470
Japan	1,289,630
Total	**29,216,501**

2.5.3 STATE OF CALIFORNIA

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls, but is still a substantial contributor to the United States (U.S.) emissions inventory total (27). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2019 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2017 GHG emissions period, California emitted an average 424.1 million metric tons (MMT) of CO_2e per year ($MMTCO_2e/yr$) (28).

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

2.6.1 PUBLIC HEALTH

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced (29).

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures

[3] Used http://unfccc.int data for Annex I countries. Consulted the CAIT Climate Data Explorer in https://www.climatewatchdata.org site to reference Non-Annex I countries of China and India.

remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat (29).

2.6.2 WATER RESOURCES

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on the Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages (29).

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. Winter tourism could be adversely affected, under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding (29).

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply (29).

2.6.3 AGRICULTURE

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth (29).

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts (29).

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates (29).

2.6.4 FORESTS AND LANDSCAPES

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation (29).

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC (29).

2.6.5 RISING SEA LEVELS

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches (29).

2.7 REGULATORY SETTING

2.7.1 INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

UNITED NATION'S FRAMEWORK CONVENTION ON CLIMATE CHANGE (CONVENTION)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

INTERNATIONAL CLIMATE CHANGE TREATIES

The Kyoto Protocol is an international agreement linked to the Convention. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014 more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a) (30).

On November 4, 2019, the Trump administration formally notified the U.N. that the U.S. would withdraw from the Paris Agreement, which became effective one year after the notification in 2020. On January 20, 2020, President Biden signed the instrument to bring the U.S. back into the Paris Agreement. On February 19, 2021, The U.S. officially rejoined the Paris Agreement.

2.7.2 NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG ENDANGERMENT

In *Massachusetts v. Environmental Protection Agency* (EPA) 549 U.S. 497 (2007), decided on April 2, 2007, the U.S. Supreme Court (Supreme Court) found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Federal Clean Air Act (CAA). The Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings (31).

CLEAN VEHICLES

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 MMT and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle

standards would achieve up to a 10% reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On August 2,2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend exiting CAFE and tailpipe CO_2 standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO_2 emissions standards by 1.5% each year through model year 2026 (32).

MANDATORY REPORTING OF GHGS

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

NEW SOURCE REVIEW

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."*

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

STANDARDS OF PERFORMANCE FOR GHG EMISSIONS FOR NEW STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS

As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO_2 for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts (MW) would be required to meet an output-based standard of 1,000 pounds (lbs) of CO_2 per MW-hour (MWh), based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016 the Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards. The Clean Power Plan was officially repealed on June 19, 2019, when the EPA issued the final Affordable Clean Energy rule (ACE). Under ACE, new state emission guidelines were established that provided existing coal-fired electric utility generating units with achievable standards.

CAP-AND-TRADE

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N_2O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008 and in 2020 has retained all participating states.

The Western Climate Initiative (WCI) partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15% below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015. While the WCI has yet to publish whether it has successfully reached the 2020 emissions goal initiative set in 2007, SB 32, requires that California, a major partner in the WCI, adopt the goal of reducing statewide GHG emissions to 40% below the 1990 level by 2030.

SMARTWAY PROGRAM

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (33):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HDTs will have to comply with CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10% or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

2.7.3 CALIFORNIA

2.7.3.1 LEGISLATIVE ACTIONS TO REDUCE GHGS

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water

conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

EXECUTIVE ORDER S-3-05

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

AB 32

The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "GHGs" as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

CARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007 (34). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (35). At that level, a 28.4% reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, CARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7% reduction from BAU is required to achieve 1990 levels (36) .

PROGRESS IN ACHIEVING AB 32 TARGETS AND REMAINING REDUCTIONS REQUIRED

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by CARB for 2000 through 2012 (37). The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 $MMTCO_2e$ (AB 32 2020 target)
- 2000: 463 $MMTCO_2e$ (an average 8% reduction needed to achieve 1990 base)
- 2010: 450 $MMTCO_2e$ (an average 5% reduction needed to achieve 1990 base)

CARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, CARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4% and the latest reduction from 2020 BAU is 21.7%.

- 2020: 545 $MMTCO_2e$ BAU (an average 21.7% reduction from BAU needed to achieve 1990 base)

SB 375 – THE SUSTAINABLE COMMUNITIES AND CLIMATE PROTECTION ACT OF 2008

Passing the Senate on August 30, 2008, Senate Bill (SB) 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375 also requires Metropolitan Planning Organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).

3. Incorporates the mitigation measures required by an applicable prior environmental document.

AB 1493

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in about a 22% reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30% reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles (EV) and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

SB 350— CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015

In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.

- Reorganize the Independent System Operator to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

SB 32

On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (11).

CARB SCOPING PLAN

CARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (35). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33%;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the LCFS; and
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

CARB approved the First Scoping Plan Update on May 22, 2014. The First Scoping Plan Update identifies the next steps for California's climate change strategy. The First Scoping Plan Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050. The First Scoping Plan Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. The First Scoping Plan Update does not set new targets for the State but describes

a path that would achieve the long term 2050 goal of Executive Order S-3-05 for emissions to decline to 80% below 1990 levels by 2050 (37).

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the amount of reductions California must achieve to return to the 1990 emissions level by 2020 as required by AB 32. The no-action scenario is known as "business-as-usual" or BAU. CARB originally defined the BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the Scoping Plan.

As part of CEQA compliance for the Scoping Plan, CARB prepared a Supplemental Functional Equivalent Document (FED) in 2011. The FED included an updated 2020 BAU emissions inventory projection based on current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006–2008. The new BAU estimate includes emission reductions for the million-solar-roofs program, the AB 1493 motor vehicle GHG emission standards, and the LCFS. In addition, CARB factored into the 2020 BAU inventory emissions reductions associated with 33% RPS for electricity generation. The updated BAU estimate of 507 $MMTCO_2e$ by 2020 requires a reduction of 80 $MMTCO_2e$, or a 16% reduction below the estimated BAU levels to return to 1990 levels (i.e., 427 $MMTCO_2e$) by 2020.

In order to provide a BAU reduction that is consistent with the original definition in the Scoping Plan and with threshold definitions used in thresholds adopted by lead agencies for CEQA purposes and many CAPs, the updated inventory without regulations was also included in the Supplemental FED. CARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 $MMTCO_2e$. The updated CARB 2020 BAU projection in the Supplemental FED is 545 $MMTCO_2e$. Considering the updated BAU estimate of 545 $MMTCO_2e$ by 2020, CARB estimates a 21.7% reduction below the estimated statewide BAU levels is necessary to return to 1990 emission levels (i.e., 427 $MMTCO_2e$) by 2020, instead of the approximate 28.4% BAU reduction previously reported under the original Climate Change Scoping Plan (35).

2017 CLIMATE CHANGE SCOPING PLAN UPDATE

In compliance with AB 32 and the 2008 Scoping Plan, the target year 2020 has been fulfilled and will look onward to the 2017 Scoping Plan that should be in compliance by 2030.

In November 2017, CARB released the 2017 Scoping Plan Update, which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan Update reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

The 2017 Scoping Plan Update establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030.

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of zero-emission vehicles (ZEV) trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and hydroflurocarbon emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the 2017 Scoping Plan acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the 2017 Scoping Plan Update also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State's long-term GHG

goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible. Alternatively, a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 $MTCO_2e$ per year ($MTCO_2e$/yr), "indicating that existing state policies will likely allow California to meet its target [of 2020 levels under AB 32]." CALGAPS also showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$/yr, indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (38) (39).

CAP-AND-TRADE PROGRAM

The Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020 and ultimately achieving an 80% reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap will be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. See Title 17 of the CCR §§ 95800 to 96023). The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25,000 $MTCO_2e$/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 $MTCO_2e$/yr "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities.

Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" (30) for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year. For example, in November 2014, a covered entity was required to submit compliance instruments to cover 30% of its 2013 GHG emissions.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the First Update:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative (CARB 2014)."*

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> *"The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33% [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85% of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by CARB in*

> *AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures* (37)*."*

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85% of California's GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program.

The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with vehicle miles traveled (VMT) are covered by the Cap-and-Trade Program (40). In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the Program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.[4]

2.7.3.2 EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

EXECUTIVE ORDER S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its

[4] On March 17, 2011, the San Francisco Superior Court issued a final decision in *Association of Irritated Residents v. California Air Resources Board* (Case No. CPF-09-509562). While the Court upheld the validity of CARB Scoping Plan for the implementation of AB 32, the Court enjoined CARB from further rulemaking under AB 32 until CARB amends its CEQA environmental review of the Scoping Plan to address the flaws identified by the Court. On May 23, 2011, CARB filed an appeal. On June 24, 2011, the Court of Appeal granted CARB's petition staying the trail court's order pending consideration of the appeal. In the interest of informed decision-making, on June 13, 2011, CARB released the expanded alternatives analysis in a draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document. CARB Board approved the Scoping Plan and the CEQA document on August 24, 2011.

population and to its natural resources." Pursuant to the requirements in the Order, the 2009 California Climate Adaptation Strategy was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

EXECUTIVE ORDER B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

EXECUTIVE ORDER S-01-07 – LCFS

The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. In particular, the Executive Order established a LCFS and directed the Secretary for Environmental Protection to coordinate the actions of the CEC, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by CEC on December 24, 2007) and was submitted to CARB for consideration as an "early action" item under AB 32. CARB adopted the LCFS on April 23, 2009.

The LCFS was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against CARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing CARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that LCFS adopted by CARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled CARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of CARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to

protect the public interest by allowing the LCFS regulations to remain operative while CARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. On November 16, 2015 the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

EXECUTIVE ORDER B-55-18 AND SB 100

Executive Order B-55-18 was signed by Governor Brown on September 10, 2018. The order establishes an additional Statewide policy to achieve carbon neutrality by 2045 and maintain net negative emissions thereafter. As per Executive Order B-55-18, CARB is directed to work with relevant State agencies to develop a framework for implementation and accounting that tracks progress toward this goal and to ensure future Climate Change Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

2.7.3.3 CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

TITLE 20 CCR

CCR, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

TITLE 24 CCR

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10

million metric tons (41). The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items (42):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).

  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

MWELO

The MWELO was required by AB 1881, the Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20% consistent with (SBX-7-7) 2020 mandate are expected upon compliance with the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (Executive Order B-29-15) directed Department of Water Resources (DWR) to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015 effective December 15, 2015. New development projects that include landscape areas of 500 sf or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems;
- Incentives for graywater usage;
- Improvements in on-site stormwater capture;
- Limiting the portion of landscapes that can be planted with high water use plants; and
- Reporting requirements for local agencies.

TRACTOR-TRAILER GHG REGULATION

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

PHASE I AND 2 HEAVY-DUTY VEHICLE GHG STANDARDS

CARB has adopted a new regulation for GHG emissions from HDTs and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer GHG Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. In September 2011, the EPA adopted their new rule for HDTs and engines. The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year 2014 with stringency levels increasing through model year 2018. The rule organizes truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDT) and HDT vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year HDT vehicles, including trailers. But as discussed above, the EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MDT and HDT vehicles may be pursued.

In February 2019, the OAL approved the Phase 2 Heavy-Duty Vehicle GHG Standards and became effective April 1, 2019. The Phase 2 GHG standards are needed to offset projected VMT growth and keep heavy-duty truck CO_2 emissions declining. The federal Phase 2 standards establish for the first time, federal emissions requirements for trailers hauled by heavy-duty tractors. The federal Phase 2 standards are more technology-forcing than the federal Phase 1 standards, requiring manufacturers to improve existing technologies or develop new technologies to meet the standards. The federal Phase 2 standards for tractors, vocational vehicles, and heavy-duty pick-up trucks and vans (PUVs) will be phased-in from 2021-2027, additionally for trailers, the standards are phased-in from 2018 (2020 in California) through 2027 (43).

SB 97 AND THE *CEQA GUIDELINES* UPDATE

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA.

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the *CEQA Guidelines* for implementing the CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 1506.4 was amended to state that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (44).

CALIFORNIA RPS PROGRAM (SB 100)

Under the existing RPS, 25% of retail sales are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative

emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), the Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

2.8 DISCUSSION ON ESTABLISHMENT OF SIGNIFICANCE THRESHOLDS

CITY OF HESPERIA CLIMATE ACTION PLAN (CAP)

On July 20, 2010, the City of Hesperia adopted the CAP, which provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate (45). The CAP recommends GHG emissions targets that are consistent with the reduction targets of the State of California and presents a number of strategies that will make it possible for the City to meet the recommended targets. Strategy CAP-1 specifies that "projects that are consistent with this CAP could result in less than significant impacts regarding climate change. This is because emissions from these projects are generally accounted for in this CAP and would be consistent with this CAP reduction target. To be consistent with this CAP, CEQA projects must implement the applicable CAP implementation strategies listed in Section 4.2" Per CAP Implementation Action 1.5 (CAP-1.5), projects that require a discretionary approval shall reduce operational GHG emissions by at least 12%, without accounting for regulations discussed in the CAP.

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3 PROJECT GREENHOUSE GAS IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a potentially significant GHG impact. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (46):

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

3.3 MODELS EMPLOYED TO ANALYZE GREENHOUSE GASES EMISSIONS

3.3.1 CALIFORNIA EMISSIONS ESTIMATOR MODEL™

In May 2022 California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod version 2022.1. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (47). MDAQMD has approved the latest version of CalEEMod for modeling and evaluation of criteria air pollutant emissions and GHG emissions. Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity are provided in Appendices 3.1 through 3.3. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water, refrigerants.

3.4 CONSTRUCTION EMISSIONS

Project construction actvities would generate CO_2, CH_4, and N_2O emissions. The report *Amargosa and Palmetto High-Cube Warehouse Air Quality Impact Analysis* (Urban Crossroads, Inc.) (AQIA) contains detailed information regarding Project construction activities (48). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving

- Architectural Coating

3.4.1 CONSTRUCTION DURATION

Construction is expected to commence in January 2023 and will last through December 2023. Construction duration by phase is shown on Table 3-2. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[5] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*. The duration of construction activity was based on the 2024 opening year.

TABLE 3-1: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	1/15/2023	2/1/2023	13
Grading	2/1/2023	3/31/2023	43
Building Construction	3/15/2023	11/30/2023	187
Paving	11/15/2023	12/30/2023	33
Architectural Coating	11/6/2023	12/30/2023	40

3.4.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. A detailed summary of construction equipment assumptions by phase is provided at Table 3-2. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this GHGA.

TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Phase Name	Equipment	Number	Hours Per Day
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Crawler Tractors	2	8

[5] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3"OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Phase Name	Equipment	Number	Hours Per Day
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. MDAQMD follows the SCAQMD recommendation in calculating the total GHG emissions for construction activities by amortizing the emissions over the life of the Project by dividing it by a 30- year project life then adding that number to the annual operational phase GHG emissions (49). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3-3.

TABLE 3-3: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e
2023	868.00	0.03	0.04	0.75	881.00
Total GHG Emissions	868.00	0.03	0.04	0.75	881.00
Amortized Construction Emissions ($MTCO_2e$)	**28.93**	**0.00**	**0.00**	**0.03**	**29.37**

3.5 OPERATIONAL EMISSIONS

Project operations would generate GHG emissions of CO_2, CH_4, and N_2O. Primary GHG emissions sources would include:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Solid Waste Management
- Water Supply, Treatment, and Distribution

Unless otherwise noted, all emissions modeling presented herein employed CalEEMod default inputs and parameters.

3.5.1 AREA SOURCE EMISSIONS

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that on October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024.

3.5.2 ENERGY SOURCE

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered. Based on information provided by the Project Applicant, the Project would not utilize natural gas and therefore no air quality emissions from energy sources would occur.

3.5.3 MOBILE SOURCE

The Project GHG emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis* were utilized in this analysis (50).

APPROACH FOR ANALYSIS OF THE PROJECT

In order to determine emissions from passenger car vehicles, the CalEEMod defaults were utilized for trip length and trip purpose for the proposed industrial land uses.

For the proposed industrial uses, it is important to note that although the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis* does not breakdown passenger cars by type, this analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1[6] & LDT2[7]), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. To account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis:

[6] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[7] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 3-4: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High Cube Fulfillment (Non-Sort Facility) Warehouse	52.72%	4.97%	22.22%	17.18%	2.88%

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, MDV, and MCY vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated SCAQMD recommended truck trip length 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 40 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages taken from the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis*. The trip length function for the general light industrial and manufacturing uses has been revised to 30.47 miles with an assumption of 100% primary trips for the proposed industrial land uses.

In order to be consistent with the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis*, trucks are broken down by truck type. The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided in the *Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis*. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1[8] & LHDT2 [9])/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the following fleet mix was utilized in this analysis:

TABLE 3-5: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High Cube Fulfillment (Non-Sort Facility) Warehouse	13.03%	3.49%	20.87%	62.61%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

3.5.4 ON-SITE CARGO HANDLING EQUIPMENT EMISSIONS

It is common for warehouse buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this particular Project, on-site modeled operational equipment includes up to two (2) 200 horsepower (hp), compressed natural gas or gasoline-powered tractors/loaders/backhoes operating at 4 hours a day[10] for 365 days of the year.

[8] Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

[9] Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

[10] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo

3.5.6 SOLID WASTE MANAGEMENT

Industrial land uses will result in the generation and disposal of solid waste. A percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material.

3.5.7 WATER SUPPLY, TREATMENT, AND DISTRIBUTION

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water.

3.6 EMISSIONS SUMMARY

PROJECT BASELINE GHG EMISSIONS (PROJECT GHG EMISSIONS WITHOUT CURRENT REGULATORY REQUIREMENTS)

As shown on Table 3-6, without accounting for current regulatory requirements, Project GHG emissions would total approximately 5,793.17 $MTCO_2e$ per year.

TABLE 3-6: PROJECT BASELINE GHG EMISSIONS SUMMARY

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e
Annual construction-related emissions amortized over 30 years	28.93	1.00E-03	1.33E-03	2.50E-02	29.37
Mobile Source	3,288.00	0.06	0.25	4.43	3,368.00
Area Source	7.30	< 0.005	< 0.005	0.00	7.51
Energy Source	1,287.00	0.08	0.01	0.00	1,291.00
Water	256.00	3.77	0.09	0.00	378.00
Waste	41.90	4.19	0.00	0.00	147.00
On-site Equipment Source	0.00	0.00	0.00	0.00	572.30
Total CO_2e (All Sources)	**5,793.17**				

Source: CalEEMod output, See Appendix 3.2 for detailed model outputs.

PROJECT NET GHG EMISSIONS (PROJECT GHG EMISSIONS WITH IMPLEMENTATION OF CURRENT REGULATORY REQUIREMENTS)

As shown on Table 3-7, after implementation of current regulatory requirements, Project GHG emissions would total approximately 4,894.17 $MTCO_2e$ per year. The Project GHG emissions estimates presented at Table 3-7 reflect contemporary GHG emissions regulatory actions enacted subsequent to adoption of the City's 2010 CAP. These regualtory actions (notably

Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

implementation of the RPS) would yield an approximate 9% reduction in Project GHG emissions from sources other than vehicles. An additional 7% reduction in GHG emissions (primarily from vehicular/mobile sources) would be achieved through on-going implementation of the Pavley Fuel Efficiency Standards. These measures, which are not reflected in the CAP, would reduce Project GHG emissions by approximately 16%.

TABLE 3-7: PROJECT NET GHG EMISSIONS SUMMARY –
GHG EMISSIONS WITH IMPLEMENTATION OF CURRENT REGULATORY REQUIREMENTS

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e
Annual construction-related emissions amortized over 30 years	28.93	1.00E-03	1.33E-03	2.50E-02	29.37
Mobile Source	2,895.00	0.06	0.25	4.43	2,975.00
Area Source	7.30	< 0.005	< 0.005	0.00	7.51
Energy Source	893.00	0.08	0.01	0.00	896.00
Water	146.00	3.77	0.09	0.00	267.00
Waste	41.90	4.19	0.00	0.00	147.00
On-site Equipment Source	0.00	0.00	0.00	0.00	572.30
Total CO_2e (All Sources)	**4,894.17**				

Source: CalEEMod output, See Appendix 3.3 for detailed model outputs.

3.7 GREENHOUSE GAS EMISSIONS FINDINGS AND RECOMMENDATIONS

3.7.1 GHG IMPACT #1

The Project would not generate direct or indirect greenhouse gas emission that would result in a significant impact on the environment.

The Project has the potential to generate a total of approximately 4,894.17 $MTCO_2e$/yr, after control measures as summarized on Table 3-7, and meets the City's CAP target of a 12% reduction. An individual project cannot generate enough GHG emissions to influence global climate change. The project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of GHGs, which when taken together may have a significant impact on global climate change. Because the City's CAP addresses GHG emissions reduction, is in concert with AB 32 and international efforts to address global climate change and includes specific local requirements that will substantially lessen the cumulative problem, compliance with the CAP fulfills the description of mitigation found in CEQA Guidelines §15130(a)(3) and §15183.5.

3.7.2 GHG IMPACT #2

The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

As previously stated, pursuant to 15604.4 of the *CEQA Guidelines*, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (46). As such, the Project's consistency with SB 32 (2017 Scoping Plan) discussed below. It should be noted that the Project's consistency with the 2017 Scoping Plan also satisfies consistency with AB 32 since the 2017 Scoping Plan is based on the overall targets established by AB 32. Consistency with the 2008 Scoping Plan is not necessary, since the target year for the 2008 Scoping Plan was 2020, and the Project's buildout year is 2024. As such the 2008 Scoping Plan does not apply and consistency with the 2017 Scoping Plan is relevant. For reasons outlined herein, the Project would result in a less than significant impact with respect to GHG emissions for GHG Impact #2.

2017 SCOPING PLAN CONSISTENCY

The *2017 Scoping Plan* Update reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table 3-8 summarizes the project's consistency with the *2017 Scoping Plan*. As summarized, the project will not conflict with any of the provisions of the *Scoping Plan* and in fact supports seven of the action categories.

TABLE 3-8: 2017 SCOPING PLAN CONSISTENCY SUMMARY[11]

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	Consistent. The Project would use energy from Southern California Edison (SCE). SCE has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. The Project would not interfere with or obstruct SCE energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. The Project would be constructed in compliance with incumbent California Building Code requirements. Specifically, new buildings must achieve compliance with applicable Building and Energy Efficiency Standards and California Green Building Standards

[11] Measures can be found at the following link: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

Action	Responsible Parties	Consistency
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		requirements. The Project includes energy efficient field lighting and fixtures that meet the incumbent Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty EVs by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2025 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
At least 4.2 million zero emission and plug-in hybrid light-duty EVs by 2030.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2030 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Medium- and Heavy-Duty GHG Phase 2.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.

Action	Responsible Parties	Consistency
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20% of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100% of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.		Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with innovative clean transit regulations or strategies.
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5% of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10% in 2025 and remaining flat through 2030.		Consistent. This Project is not responsible for implementation of SB 375. The Project would not obstruct or interfere with last mile regulations or strategies.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		Consistent. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Consistent. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.

Action	Responsible Parties	Consistency
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GO-Biz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	Consistent. The Project would not obstruct or interfere with agency efforts to harmonize transportation facility project performance with emissions reductions and increase competitiveness of transit and active transportation modes.
By 2019, develop pricing policies to support low-GHG transportation (e.g., low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	Consistent. The Project would not obstruct or interfere with agency efforts to develop pricing policies to support low-GHG transportation.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	Consistent. This measure would apply to all trucks accessing the Project sites, this may include existing trucks or new trucks that are part of the statewide goods movement sector. The Project would not obstruct or interfere with agency efforts to Improve freight system efficiency.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with agency efforts to deploy zero and/or near-zero emissions freight vehicles.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	Consistent. When adopted, this measure would apply to all fuel purchased and used by the Project in the state. The Project would not obstruct or interfere with agency efforts to adopt a Low Carbon

Action	Responsible Parties	Consistency
		Fuel Standard with a Carbon Intensity reduction of 18%.
Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030		
40% reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, California State Water Resource Control Board (SWRCB), Local Air Districts	Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with agency efforts to reduce methane, hydrofluorocarbon, and black carbon emissions.
50% reduction in black carbon emissions below 2013 levels.		
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with agency efforts to develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Consistent. The Project would be required to comply with any applicable Cap-and-Trade Program provisions. The Project would not obstruct or interfere agency efforts to implement the post-2020 Cap-and-Trade Program.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Consistent. This measure is not within the purview of this Project. the Project site is not an identified property that needs to be conserved. The Project would not obstruct or interfere with agency efforts to protect land from conversion.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with agency efforts to Increase the long-term resilience of carbon storage and/or enhance sequestration capacity.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		Consistent. To the extent appropriate for the proposed industrial buildings, wood products would be used in construction, including for the roof structure.
Establish scenario projections to serve as the foundation for the Implementation Plan		Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with agency efforts to develop a foundation for the Implementation Plan.

Action	Responsible Parties	Consistency
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with agency efforts to implement the Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Consistent. This measure is not within the purview of this Project. The Project would not obstruct or interfere with agency efforts to Identify and expand funding and financing mechanisms to support GHG reductions.

As shown above, the Project would not conflict with any of the *2017 Scoping Plan* elements as any regulations adopted would apply directly or indirectly to the Project. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40% below 1990 levels by 2030 (38).

3.8 CITY OF HESPERIA CLIMATE ACTION PLAN

The Project's consistency with applicable provisions of the City CAP is summarized on Tables 3-9, 3-10.

TABLE 3-9: CAP CONSISTENCY

CAP Strategy		Project Consistency
CAP-1.5	Projects that require a discretionary approval shall reduce operational GHG emissions by at least 12%, without accounting for regulations discussed in the CAP. The project inventory should include all potential sources, including but not limited to those identified in this CAP.	Consistent. The inventory prepared in this report includes all applicable sources of GHG emissions including area, mobile. Water use, water and solid waste. Implementation of current GHG emissions reduction requirements (measures not reflected in the CAP) would reduce Project GHG emissions by approximately 16% (see: Table 3-10). The Project would not otherwise conflict with, or obstruct implementation of, the City CAP.

TABLE 3-10: PROJECT CONSISTENCY WITH CAP GHG EMISSIONS REDUCTION REQUIREMENTS

Project GHG Emissions	Emissions ($MTCO_2e$ /yr)
Baseline Project GHG Emissions	5,793.17
Project GHG Emissions With Implementation of Current Regulatory Requirements (Measures not reflected in the CAP)	4,894.17
% Reduction	**16%**

Source: CalEEMod output, See Appendices 3.2 and 3.3 for detailed model outputs.

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5 CERTIFICATION

The contents of this greenhouse gas study report represent an accurate depiction of the greenhouse gas impacts associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this greenhouse gas report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

Haseeb Qureshi
Principal
Urban Crossroads, Inc.
hqureshi@urbanxroads.com

EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
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APPENDIX 3.1:

CALEEMOD ANNUAL CONSTRUCTION EMISSIONS MODEL OUTPUTS

14848-Palmetto Industrial (Construction) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Construction)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.18	2.70	16.3	36.0	0.04	0.62	3.28	3.91	0.58	0.79	1.37	—	7,900	7,900	0.24	0.41	19.0	8,047
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	11.1	70.8	89.0	73.5	0.12	4.50	9.00	13.5	4.14	3.83	7.97	—	15,076	15,076	0.53	0.55	0.59	15,254
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.49	9.46	16.0	22.8	0.03	0.68	2.33	3.02	0.63	0.65	1.28	—	5,240	5,240	0.18	0.23	4.52	5,319
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.45	1.73	2.93	4.16	0.01	0.12	0.43	0.55	0.12	0.12	0.23	—	868	868	0.03	0.04	0.75	881

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.83	4.90	47.0	38.0	0.05	2.53	—	2.53	2.33	—	2.33	—	5,530	5,530	0.22	0.04	—	5,549
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.67	1.35	< 0.005	0.09	—	0.09	0.08	—	0.08	—	197	197	0.01	< 0.005	—	198
Dust From Material Movement	—	—	—	—	—	—	0.20	0.20	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.31	0.25	< 0.005	0.02	—	0.02	0.02	—	0.02	—	32.6	32.6	< 0.005	< 0.005	—	32.7
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.12	1.15	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	235	235	0.01	0.01	0.03	238
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	132	132	< 0.005	0.02	0.01	137
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	8.63	8.63	< 0.005	< 0.005	0.02	8.75

Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.70	4.70	< 0.005	< 0.005	0.01	4.90
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	1.43	1.43	< 0.005	< 0.005	< 0.005	1.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.00	4.20	40.9	32.7	0.06	1.96	—	1.96	1.80	—	1.80	—	6,715	6,715	0.27	0.05	—	6,738
Dust From Material Movement	—	—	—	—	—	—	2.67	2.67	—	0.98	0.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.82	3.85	0.01	0.23	—	0.23	0.21	—	0.21	—	791	791	0.03	0.01	—	794

Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.88	0.70	< 0.005	0.04	—	0.04	0.04	—	0.04	—	131	131	0.01	< 0.005	—	131
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.32	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	269	269	0.01	0.01	0.03	272
Vendor	0.02	0.02	0.56	0.26	< 0.005	0.01	0.03	0.03	0.01	0.01	0.02	—	495	495	< 0.005	0.07	0.03	515
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	62.7	62.7	< 0.005	0.01	< 0.005	65.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.17	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	32.6	32.6	< 0.005	< 0.005	0.06	33.1
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	58.3	58.3	< 0.005	0.01	0.07	60.7
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.38	7.38	< 0.005	< 0.005	0.01	7.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	5.40	5.40	< 0.005	< 0.005	0.01	5.48
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.65	9.65	< 0.005	< 0.005	0.01	10.1

Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.28

3.5. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.62	1.36	12.8	14.3	0.03	0.60	—	0.60	0.55	—	0.55	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.69	6.56	7.32	0.01	0.31	—	0.31	0.28	—	0.28	—	1,347	1,347	0.05	0.01	—	1,352
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.20	1.34	< 0.005	0.06	—	0.06	0.05	—	0.05	—	223	223	0.01	< 0.005	—	224
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.46	1.27	1.30	20.6	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	3,193	3,193	0.13	0.10	13.5	3,240
Vendor	0.10	0.08	2.23	1.07	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,078	2,078	< 0.005	0.28	5.51	2,168
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.23	1.12	1.39	13.8	0.00	0.00	0.17	0.17	0.00	0.00	0.00	—	2,823	2,823	0.14	0.10	0.35	2,858
Vendor	0.10	0.07	2.36	1.09	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	2,080	2,080	< 0.005	0.28	0.14	2,165
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.64	0.58	0.76	7.93	0.00	0.00	0.09	0.09	0.00	0.00	0.00	—	1,490	1,490	0.07	0.05	2.97	1,510
Vendor	0.05	0.04	1.21	0.55	0.01	0.01	0.06	0.07	0.01	0.02	0.04	—	1,065	1,065	< 0.005	0.15	1.22	1,110
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.14	1.45	0.00	0.00	0.02	0.02	0.00	0.00	0.00	—	247	247	0.01	0.01	0.49	250
Vendor	0.01	0.01	0.22	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	176	176	< 0.005	0.02	0.20	184
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Paving (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.88	8.06	10.0	0.01	0.41	—	0.41	0.38	—	0.38	—	1,512	1,512	0.06	0.01	—	1,517
Paving	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.73	0.91	< 0.005	0.04	—	0.04	0.03	—	0.03	—	137	137	0.01	< 0.005	—	137
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	22.6	22.6	< 0.005	< 0.005	—	22.7
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	0.99	0.00	0.00	0.01	0.01	0.00	0.00	0.00	—	202	202	0.01	0.01	0.02	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.10	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	18.8	18.8	< 0.005	< 0.005	0.04	19.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	3.11	3.11	< 0.005	< 0.005	0.01	3.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Architectural Coating (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.25	1.54	< 0.005	0.05	—	0.05	0.05	—	0.05	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	66.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.14	0.17	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	19.5	19.5	< 0.005	< 0.005	—	19.6
Architectural Coatings	—	7.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.23	3.23	< 0.005	< 0.005	—	3.24
Architectural Coatings	—	1.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.25	0.22	0.28	2.77	0.00	0.00	0.03	0.03	0.00	0.00	0.00	—	565	565	0.03	0.02	0.07	572
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.34	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	63.7	63.7	< 0.005	< 0.005	0.13	64.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	< 0.005	< 0.005	0.00	0.00	0.00	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	1/15/2023	2/1/2023	5.00	13.0	—
Grading	Grading	2/1/2023	3/31/2023	5.00	43.0	—
Building Construction	Building Construction	3/15/2023	11/30/2023	5.00	187	—
Paving	Paving	11/15/2023	12/30/2023	5.00	33.0	—
Architectural Coating	Architectural Coating	11/6/2023	12/30/2023	5.00	40.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38

Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Average	2.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	87.0	0.43

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	15.0	10.2	HHDT,MHDT

Grading	Hauling	0.88	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	210	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	63.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	42.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	786,896	262,299	49,795

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	45.5	0.00	—
Grading	300	—	172	0.00	—
Paving	0.00	0.00	0.00	0.00	19.1

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Parking Lot	3.93	100%
Other Non-Asphalt Surfaces	15.1	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8
Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9

Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—
Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—

2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9
Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0

Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction

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APPENDIX 3.2:

CALEEMOD ANNUAL OPERATIONAL EMISSIONS MODEL OUTPUTS (WITHOUT REGULATORY REQUIREMENTS)

14848-Palmetto Industrial (Operations) Detailed Report

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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Operations)
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—
User Defined Industrial	500	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	27,622	28,096	49.0	2.32	72.7	30,086
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	26,308	26,782	49.0	2.34	1.89	28,706
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	23,582	24,056	48.9	2.09	26.7	25,929
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	3,904	3,983	8.10	0.35	4.43	4,293

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.20	4.67	13.6	62.0	0.21	0.25	5.30	5.55	0.24	0.99	1.22	—	21,482	21,482	0.43	1.73	72.7	22,082
Area	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	27,622	28,096	49.0	2.32	72.7	30,086
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.80	4.27	14.6	46.7	0.20	0.25	5.30	5.55	0.24	0.99	1.22	—	20,257	20,257	0.44	1.76	1.89	20,794
Area	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	26,308	26,782	49.0	2.34	1.89	28,706
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13	3.67	12.6	43.3	0.17	0.21	4.52	4.73	0.20	0.84	1.04	—	17,487	17,487	0.38	1.50	26.7	17,972
Area	1.90	13.2	0.09	10.7	< 0.005	0.01	—	0.01	0.02	—	0.02	—	44.1	44.1	< 0.005	< 0.005	—	45.4
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	5,392	5,392	0.49	0.03	—	5,414
Water	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	23,582	24,056	48.9	2.09	26.7	25,929
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.75	0.67	2.30	7.90	0.03	0.04	0.82	0.86	0.04	0.15	0.19	—	2,895	2,895	0.06	0.25	4.43	2,975

Area	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Energy	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	893	893	0.08	0.01	—	896
Water	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Total	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	3,904	3,983	8.10	0.35	4.43	4,293

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.83	4.36	3.01	58.6	0.11	0.05	0.44	0.49	0.04	0.13	0.17	—	11,178	11,178	0.40	0.28	43.2	11,313
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.37	0.31	10.6	3.40	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,304	10,304	0.03	1.46	29.5	10,769
Total	5.20	4.67	13.6	62.0	0.21	0.25	1.16	1.41	0.24	0.36	0.60	—	21,482	21,482	0.43	1.73	72.7	22,082

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.45	3.98	3.35	43.3	0.10	0.05	0.44	0.49	0.04	0.13	0.17	—	9,948	9,948	0.41	0.30	1.12	10,048
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.35	0.29	11.2	3.41	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,309	10,309	0.03	1.46	0.77	10,746
Total	4.80	4.27	14.6	46.7	0.20	0.25	1.16	1.41	0.24	0.36	0.60	—	20,257	20,257	0.44	1.76	1.89	20,794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.70	0.62	0.55	7.38	0.02	0.01	0.07	0.08	0.01	0.02	0.03	—	1,442	1,442	0.06	0.04	2.63	1,459
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.06	0.05	1.76	0.52	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	1,453	1,453	< 0.005	0.21	1.80	1,516
Total	0.75	0.67	2.30	7.90	0.03	0.04	0.18	0.22	0.04	0.06	0.09	—	2,895	2,895	0.06	0.25	4.43	2,975

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,205	2,205	0.21	0.03	—	2,217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,348	2,348	0.22	0.03	—	2,361
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	2,205	2,205	0.21	0.03	—	2,217
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	143	143	0.01	< 0.005	—	144
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,348	2,348	0.22	0.03	—	2,361
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	365	365	0.03	< 0.005	—	367
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	23.7	23.7	< 0.005	< 0.005	—	23.9
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	389	389	0.04	< 0.005	—	391

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86	3.56	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Total	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.35	0.32	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Total	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	221	658	880	22.8	0.55	—	1,612
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.7	109	146	3.77	0.09	—	267

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790	391	369	245,576	14,380	7,113	6,713	4,469,970
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	115	57.0	53.5	35,722	3,502	1,736	1,629	1,088,464

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	786,896	262,299	49,795

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,307,966	349	0.0330	0.0040	9,499,636
Parking Lot	149,963	349	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
User Defined Industrial	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,555,625	5,645,327
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	470	0.00
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit

Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8

Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—

Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9

Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—

Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule

Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Dust From Material Movement	Ex
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle
Operations: Refrigerants	Unrefrigerated warehouse modeled with no refrigerant emissions

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APPENDIX 3.3:

CALEEMOD ANNUAL OPERATIONAL EMISSIONS MODEL OUTPUTS (WITH REGULATORY REQUIREMENTS)

14848-Palmetto Industrial (Operations Without Regulatory Requirements)) Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	14848-Palmetto Industrial (Operations Without Regulatory Requirements))
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	1.40
Location	34.436795901992426, -117.37836806854374
County	San Bernardino-Mojave Desert
City	Hesperia
Air District	Mojave Desert AQMD
Air Basin	Mojave Desert
TAZ	5106
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southwest Gas Corp.

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	500	1000sqft	11.5	499,700	255,000	—	—	—
Parking Lot	508	Space	3.93	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	659	1000sqft	15.1	0.00	0.00	—	—	—
User Defined Industrial	500	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	30,669	31,143	49.0	2.34	72.7	33,137
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	29,354	29,829	49.0	2.35	1.89	31,757
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	29,000	29,475	48.9	2.11	26.7	31,352
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	4,801	4,880	8.10	0.35	4.43	5,191

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.20	4.67	13.6	62.0	0.21	0.25	5.30	5.55	0.24	0.99	1.22	—	21,482	21,482	0.43	1.73	72.7	22,082
Area	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	7,772	7,772	0.46	0.05	—	7,797
Water	—	—	—	—	—	—	—	—	—	—	—	221	1,326	1,547	22.8	0.55	—	2,280
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	9.34	19.9	16.4	85.9	0.23	0.47	5.30	5.78	0.47	0.99	1.46	475	30,669	31,143	49.0	2.34	72.7	33,137
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.80	4.27	14.6	46.7	0.20	0.25	5.30	5.55	0.24	0.99	1.22	—	20,257	20,257	0.44	1.76	1.89	20,794
Area	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	7,772	7,772	0.46	0.05	—	7,797
Water	—	—	—	—	—	—	—	—	—	—	—	221	1,326	1,547	22.8	0.55	—	2,280
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	5.08	15.9	17.1	48.9	0.21	0.44	5.30	5.75	0.43	0.99	1.42	475	29,354	29,829	49.0	2.35	1.89	31,757
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.13	3.67	12.6	43.3	0.17	0.21	4.52	4.73	0.20	0.84	1.04	—	19,859	19,859	0.38	1.50	26.7	20,344
Area	1.90	13.2	0.09	10.7	< 0.005	0.01	—	0.01	0.02	—	0.02	—	44.1	44.1	< 0.005	< 0.005	—	45.4
Energy	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	7,772	7,772	0.46	0.05	—	7,797
Water	—	—	—	—	—	—	—	—	—	—	—	221	1,326	1,547	22.8	0.55	—	2,280
Waste	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Total	6.31	17.1	15.3	56.2	0.19	0.42	4.52	4.94	0.41	0.84	1.26	475	29,000	29,475	48.9	2.11	26.7	31,352
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.75	0.67	2.30	7.90	0.03	0.04	0.82	0.86	0.04	0.15	0.19	—	3,288	3,288	0.06	0.25	4.43	3,368

Area	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Energy	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,287	1,287	0.08	0.01	—	1,291
Water	—	—	—	—	—	—	—	—	—	—	—	36.7	219	256	3.77	0.09	—	378
Waste	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Total	1.15	3.11	2.79	10.2	0.03	0.08	0.82	0.90	0.08	0.15	0.23	78.6	4,801	4,880	8.10	0.35	4.43	5,191

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.83	4.36	3.01	58.6	0.11	0.05	0.44	0.49	0.04	0.13	0.17	—	11,178	11,178	0.40	0.28	43.2	11,313
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.37	0.31	10.6	3.40	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,304	10,304	0.03	1.46	29.5	10,769
Total	5.20	4.67	13.6	62.0	0.21	0.25	1.16	1.41	0.24	0.36	0.60	—	21,482	21,482	0.43	1.73	72.7	22,082

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	4.45	3.98	3.35	43.3	0.10	0.05	0.44	0.49	0.04	0.13	0.17	—	9,948	9,948	0.41	0.30	1.12	10,048
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.35	0.29	11.2	3.41	0.10	0.20	0.72	0.92	0.19	0.23	0.42	—	10,309	10,309	0.03	1.46	0.77	10,746
Total	4.80	4.27	14.6	46.7	0.20	0.25	1.16	1.41	0.24	0.36	0.60	—	20,257	20,257	0.44	1.76	1.89	20,794
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.70	0.62	0.55	7.38	0.02	0.01	0.07	0.08	0.01	0.02	0.03	—	1,835	1,835	0.06	0.04	2.63	1,852
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	0.06	0.05	1.76	0.52	0.02	0.03	0.11	0.14	0.03	0.04	0.07	—	1,453	1,453	< 0.005	0.21	1.80	1,516
Total	0.75	0.67	2.30	7.90	0.03	0.04	0.18	0.22	0.04	0.06	0.09	—	3,288	3,288	0.06	0.25	4.43	3,368

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,439	4,439	0.18	0.04	—	4,455
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	288	288	0.01	< 0.005	—	289
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	4,727	4,727	0.20	0.04	—	4,744
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	4,439	4,439	0.18	0.04	—	4,455
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	288	288	0.01	< 0.005	—	289
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	4,727	4,727	0.20	0.04	—	4,744
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	735	735	0.03	0.01	—	738
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	47.8	47.8	< 0.005	< 0.005	—	47.9
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	783	783	0.03	0.01	—	785

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.28	0.14	2.55	2.14	0.02	0.19	—	0.19	0.19	—	0.19	—	3,044	3,044	0.27	0.01	—	3,053
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.05	0.03	0.47	0.39	< 0.005	0.04	—	0.04	0.04	—	0.04	—	504	504	0.04	< 0.005	—	505

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.86	3.56	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Total	3.86	15.1	0.18	21.7	< 0.005	0.03	—	0.03	0.04	—	0.04	—	89.4	89.4	< 0.005	0.01	—	92.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	10.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.73	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	11.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.96	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.35	0.32	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51
Total	0.35	2.42	0.02	1.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.51

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	1,326	1,547	22.8	0.55	—	2,280
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	221	1,326	1,547	22.8	0.55	—	2,280
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	221	1,326	1,547	22.8	0.55	—	2,280
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	221	1,326	1,547	22.8	0.55	—	2,280
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	36.7	219	256	3.77	0.09	—	378
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	36.7	219	256	3.77	0.09	—	378

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	253	0.00	253	25.3	0.00	—	886
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	41.9	0.00	41.9	4.19	0.00	—	147

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	790	391	369	245,576	14,380	7,113	6,713	4,469,970
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	115	57.0	53.5	35,722	3,502	1,736	1,629	1,088,464

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

0	0.00	786,896	262,299	49,795

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	2,307,966	702	0.0290	0.0060	9,499,636
Parking Lot	149,963	702	0.0290	0.0060	0.00
Other Non-Asphalt Surfaces	0.00	702	0.0290	0.0060	0.00
User Defined Industrial	0.00	702	0.0290	0.0060	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	115,555,625	5,645,327
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	470	0.00
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit

Temperature and Extreme Heat	33.6	annual days of extreme heat
Extreme Precipitation	4.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	22.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack	N/A	N/A	N/A	N/A
Air Quality	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	91.1
AQ-PM	32.2
AQ-DPM	57.9
Drinking Water	29.7
Lead Risk Housing	13.8

Pesticides	0.00
Toxic Releases	25.0
Traffic	83.1
Effect Indicators	—
CleanUp Sites	73.4
Groundwater	0.00
Haz Waste Facilities/Generators	65.9
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	84.6
Cardio-vascular	99.5
Low Birth Weights	5.81
Socioeconomic Factor Indicators	—
Education	67.1
Housing	11.2
Linguistic	19.9
Poverty	67.2
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	66.22610035
Employed	25.70255357
Education	—

Bachelor's or higher	31.64378288
High school enrollment	2.258437059
Preschool enrollment	41.10098807
Transportation	—
Auto Access	89.83703323
Active commuting	14.92364943
Social	—
2-parent households	97.98537149
Voting	43.48774541
Neighborhood	—
Alcohol availability	89.68304889
Park access	26.5622995
Retail density	22.41755422
Supermarket access	25.03528808
Tree canopy	7.25009624
Housing	—
Homeownership	84.70422174
Housing habitability	80.57230848
Low-inc homeowner severe housing cost burden	56.2941101
Low-inc renter severe housing cost burden	70.48633389
Uncrowded housing	64.30129603
Health Outcomes	—
Insured adults	59.70742974
Arthritis	0.6
Asthma ER Admissions	14.5
High Blood Pressure	1.1
Cancer (excluding skin)	0.9

Asthma	37.3
Coronary Heart Disease	1.0
Chronic Obstructive Pulmonary Disease	1.6
Diagnosed Diabetes	6.3
Life Expectancy at Birth	28.4
Cognitively Disabled	58.3
Physically Disabled	16.0
Heart Attack ER Admissions	1.2
Mental Health Not Good	58.7
Chronic Kidney Disease	1.3
Obesity	41.7
Pedestrian Injuries	90.6
Physical Health Not Good	24.5
Stroke	2.9
Health Risk Behaviors	—
Binge Drinking	95.3
Current Smoker	59.6
No Leisure Time for Physical Activity	48.5
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	33.8
Elderly	53.1
English Speaking	52.3
Foreign-born	39.5
Outdoor Workers	27.8
Climate Change Adaptive Capacity	—

Impervious Surface Cover	86.5
Traffic Density	80.1
Traffic Access	23.0
Other Indices	—
Hardship	53.1
Other Decision Support	—
2016 Voting	53.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	52.0
Healthy Places Index Score for Project Location (b)	42.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health and Equity Evaluation Scorecard not completed.

8. User Changes to Default Data

Screen	Justification
Land Use	Taken from site plan
Construction: Construction Phases	Client indicated construction schedule

Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8-hour work day
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction
Construction: Dust From Material Movement	Ex
Operations: Vehicle Data	Trip Characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle
Operations: Refrigerants	Unrefrigerated warehouse modeled with no refrigerant emissions
Characteristics: Utility Information	CO2 intensity factors prior to Renewable portfolio Standards (RPS) regulatory requirements (obtained from CalEEMod 2016)
Operations: Vehicle EF	CO2 emission factors per CalEEMod 2022 using 2010 EF

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APPENDIX H
Hesperia Spec. Industrial Preliminary Hydrology Report

July 2022
2021-196

Hesperia Spec. Industrial
Industrial Buildings
City of Hesperia, CA

Preliminary Hydrology Report

Prepared For:
Rachamin 5, LLC
6001E Slauson Ave.
Commerce, CA 90040
Tel. (213) 769-4222

Prepared By:
WestLAND Group, Inc.
4150 Concours, Suite 100
Ontario, CA 91764
Tel: 909-989-9789

WestLAND Group, Inc.

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   b. Soil Map
   c. SCG Memo
   d. Infiltration Study

I. Purpose and Scope

The purpose of this preliminary study is to identify the mitigation measures that must be implemented during final design in order to ensure that the project does not have adverse impacts to downstream properties. The project will develop a conceptual storm drain infrastructure plan that will demonstrate how the project will flood protect the project as required by the City of Hesperia, San Bernardino County, and FEMA regulations and policies.

This study evaluates the Post-Development Hydrological Conditions and provides the criteria for the design of the on-site storm drain systems for flood protection of the proposed structures. In the design of the storm drain system, the project performed storm drain alternative assessments and evaluated the following:

1. The ultimate storm drain solution identified as part of the Victorville Master Drainage Plan prepared by the County of San Bernardino
2. A project stand-alone solution due to the timing to implement the solution from the Victorville Master Drainage Plan

When evaluating the solution identified in the Victorville Master Drainage Plan, the following challenges were identified that make it impractical:

1. Availability of Right of Ways
2. The viability of constructing the regional basin
3. Design coordination with DWR
4. Impacts to timing and financial impacts to the project

Therefore, in the case of downstream infrastructure being absent, the guidelines established in the San Bernardino County Basin Design criteria must be met for this project.

The scope of the study includes the following:

1. Evaluate three alternatives to satisfying drainage requirements.
    a. Alternative 1 is to implement the solution identified in the Victorville MDP. However, this is not feasible due to the challenges listed previously.
    b. Alternative 2 is to release runoff from the site at a rate that does not exceed the allowable flow rate, which is equivalent to the 90% of the pre-development flow rate for a 100-year storm. To obtain the allowable flow rate, the 100-year storm for pre-development conditions is modelled as a 25-year storm per the San Bernardino County Detention Basin Guidelines.
    c. Alternative 3 is to retain the entire post-development runoff volume for a 100-year storm onsite.
2. Perform 100-year rational method calculations as outlined in the San Bernardino County Flood Control Hydrology Manual.
3. Determine peak flow rates tributary to the mainline systems.
4. Size the infiltration/retention basin using the volumes determined from the unit hydrograph calculations.
5. Preparation of a report, which consists of hydrological and hydraulic results, as well as supporting exhibits.

II. Project Site and Drainage Area Overview

The proposed site is an industrial development located near the northwest corner of Palmeto Way and Amargosa Rd in Hesperia, California. The project site is bounded by roads and can be located with the provided information below:

- South of Avenal St
- East of Amargosa Rd
- North of Palmeto Way

The site consists of several parcels both irregular and rectangular in shape which approximate to 31 acres, and part of the project will include offsite street improvements along the frontage of the project on Yucca Terrace, Phelan Road, and a portion of Highway 395. The site is entirely vacant and undeveloped and surrounded by mostly paved/dirt roads. The existing natural cover consists primarily of shrubs, native bushes and trees throughout the site. The highest elevation per survey data is located on the south westerly corner of the project site. The majority of the site will sheet flow towards the northerly east corner of the project site. Overall, the site depicts slopes of approximately 2± percent towards the northerly east corner of the project site. Existing drainage patterns can be seen in the “Pre-Developed Condition Exhibit” in Appendix C.

The proposed site is considered an industrial development, and flows will be collected through nearby catch basins and conveyed to either an above ground or underground infiltration/retention basin via a storm drain system.

The project proposes to construct one building that will be used for industrial and commercial purposes. The project will have its dedicated parking areas and truck docking areas. In addition, for water quality purposes, the project proposes a storm drain system to convey stormwater to infiltration/retention basins. Since infiltration is a priority for water quality purposes and is needed to meet the WQMP hierarchy, the project will use a combination of an above ground infiltration basin and underground CMP infiltration basin to treat the stormwater runoff for water quality purposes.

As discussed previously, there are three alternatives to managing stormwater runoff. The first alternative is to follow the solution identified in the Victorville MDP and discharge to the regional basin. However, due to challenges such as the regional basin not yet being constructed along with the Right of Way issues mentioned previously, there are timing and financial impacts that makes this alternative infeasible.

Therefore, the second alternative of releasing runoff at a rate no greater than the 25-year pre-project flow rate is evaluated. However, if this alternative were to be implemented, the flow condition in the post-development conditions will be altered from sheet flow to concentrated flow. This will result in the potential for erosion downstream of the project site and will not comply with California Drainage Law which states that there cannot be a net increase in flow and velocity. In addition, there are additional challenges such as a lack of Right of Way to discharge the flows, future liability from downstream property owners that may experience flooding due to the project discharging runoff, and the creation of future environmental habitat on offsite properties due to the concentration of flows. As a result of these challenges, the project proposes to retain the entire runoff volume for up to a 100-year storm event.

III. Methodology

The San Bernardino County Hydrology Manual, was used to develop the hydrological parameters for the hydrology analysis. The rational method was used in order to perform a hydrological analysis for the proposed project conditions. The proposed development will be designed to prevent flooding for the 100-year storm.

Peak flow rate was calculated using the Rational Method calculation as outlined in the San Bernardino County Hydrology Manual (Equation D.4)

$$Q= 0.90(I-F_m)*A$$

- 100-year AMC III
- Soil Type B
- Manning's Values Used:
    - o Existing Surface n=0.030
- Project is located in the "Desert" area

IV. Hydrology

The rainfall depths used in the hydrology calculations are as follows:

Storm Event & Duration	Rainfall (inches)
2-Year, 1-Hour	0.433
2-Year, 6-Hour	1.01
2-Year, 24-Hour	1.89
10-Year, 1-Hour	0.747
100-Year, 1-Hour	1.25
100-Year, 6-Hour	2.81
100-Year, 24-Hour	5.90

The rainfall depths were obtained from NOAA Atlas 14, which is included as part of Appendix F.

As discussed previously, the project evaluated three alternatives. However, the alternative to implement the solution identified in the Victorville MDP was eliminated due to the timing required to implement the solution due to the right of way constraints, regional hydrology studies, multi-agency coordination and financial burdens on the project. This resulted in the project to focus on the following alternatives:

1. Release runoff from the site at a rate that does not exceed 90% of the pre-development flow rate for a 25-year storm per the San Bernardino County Detention Basin Guidelines.
2. Retain the entire post-development runoff volume for a 100-year storm onsite.

For alternative 1 to be viable, the following needs to be met:

1. California Drainage Law which states that there cannot be a net increase in flow and velocity
2. The maximum outflow cannot be exceeded
3. The drainage infrastructures must be located within easements or right of ways

If alternative 1 were to be chosen, runoff would be released at a concentrated flow rate which increases the flow velocity and may cause erosion at the ditch downstream of the project site. This would therefore go against the California Drainage Law. In addition, since runoff would be discharged offsite into an adjacent property, there are additional concerns regarding easements and right of way that would allow us to discharge the runoff onto an adjacent property. Due to the concerns regarding the California Drainage Law and the easement and right of way issues, alternative 1 was deemed to be infeasible.

After assessing alternative 1 and the issues regarding timing, liability, and risk, alternative 2 was evaluated since it is easily demonstrated that this has lower risk and liability, and the client understands that there is a higher cost to implement. This alternative proposes to retain the entire post-development runoff onsite and is the option that the project will be using to satisfy the drainage requirements.

The proposed site was divided in subareas based on the proposed drainage patterns in order to better analyze the runoff produced throughout each area. Below is a summary of the results.

HYDROLOGY SUMMARY						
AREA ID	AREA (AC)	TC (MIN)	Q_{100} (CFS)	V_{100} (CF)	Retention Provided (CF)	Total V Provided (CF)
A	6.29	10	16.5	117,301	600,000	600,000 min
B	19.08	10	50.2	379,213		
C	6.22	10	15.9	81,068		
TOTAL	31.59		82.9	582,327		

BASIN SUMMARY TABLE		
BASIN ID	**RETENTION VOLUME**	**TOTAL VOLUME**
ABOVE GROUND BASIN	295,000 CF	295,000 CF min
UNDERGROUND INFILTRATION BASIN	305,000 CF	305,000 CF min
TOTAL	**600,000 CF**	**600,000 CF min**

Regarding the subsurface design, the project includes a CDS hydrodynamic separator to eliminate sediments, debris, and trash from entering the infiltration chambers to help ensure long term infiltration of the systems and reduce the risk of infiltration degradation. Runoff will be collected through nearby catch basins and first pretreated through inlet filters placed on each catch basin. Further downstream, the runoff will be further pretreated through the CDS hydrodynamic separator, and ultimately be discharged into either an above ground or underground infiltration system. For more information, please see the exhibit for Post-Developed conditions in Appendix C.

Per the infiltration study provided by Southern California Geotechnical, Inc, the site has sufficient infiltration rates to drawdown within 24 hours after the storm event. In particular, the infiltration rate was measured to be 17 in/hr. Applying a safety factor of 2 results in an effective infiltration rate of 8.5 in/hr which will be enough to completely drain the 144in CMP systems within 24 hours. A safety factor of 2 was selected due to in situ testing having been performed by Southern California Geotechnical, Inc. Southern California Geotechnical, Inc. has also been contacted to verify that the infiltration rates measured are accurate. For more information, please see the memo in Appendix D.

V. Conclusion

The project evaluated three alternatives to satisfying drainage requirements.

1. Alternative 1 is to implement the solution identified in the Victorville MDP. However, this is not feasible due to the challenges with timing.
2. Alternative 2 is to release runoff from the site at a rate that does not exceed the allowable flow rate, which is equivalent to the 90% of the pre-development flow rate for a 100-year storm. To obtain the allowable flow rate, the 100-year storm for pre-development conditions is modelled as a 25-year storm per the San Bernardino County Detention Basin Guidelines.
3. Alternative 3 is to retain the entire post-development runoff volume for a 100-year storm onsite.

As previously discussed, alternative 1 is not viable due to the timing of the regional basin. Therefore, only alternative 2 and 3 are considered to be viable solutions. However, for alternative 2, there are risks and impacts that also make it an inviable solution. In particular, runoff would be released at a concentrated flow rate which increases the flow velocity and may cause erosion at the ditch downstream of the project site. This would therefore go against the California Drainage Law. In addition, since runoff would be discharged offsite into an adjacent property, there are additional concerns regarding easements and right of way that would allow us to discharge the runoff onto an adjacent property.

Due to these concerns, the most viable option was evaluated to be alternative 3, which is to provide full retention onsite. Therefore, proposed development will provide enough volume to capture the entire runoff volume generated from a 100-year storm event and will not release any runoff off-site for up to a 100-year storm event. To store the volume, the development proposes a combination of above ground and underground infiltration/retention basins. Since the development will not release runoff off-site, the development will not negatively impact downstream conditions. The results demonstrate that the proposed on-site storm drain system and above ground and underground infiltration/retention basins will comply with the flood protection and WQMP requirements of the City of Hesperia and County of San Bernardino.

Appendix A

HYDROLOGY SUMMARY				
ID	**AREA A**	**AREA B**	**AREA C**	**TOTAL SITE**
AREA, SF	273992	831125	270943	1376060
ACRES	6.29	19.08	6.22	31.59
PERVIOUS	0.19	0.10	0.52	0.20
IMPERVIOUS	0.81	0.90	0.48	0.80
TIME OF CONCENTRATION, MIN	10	10	10	10
P_{24}	5.9	5.9	5.9	5.9
CN	79	84	60	78
AMC III CN	93	96	79	93
S	0.70	0.37	2.66	0.76
I_a	0.14	0.07	0.53	0.15
Y	0.87	0.93	0.61	0.86
I_{25}, IN/HR	2.21	2.21	2.21	2.21
I_{100}, IN/HR	2.93	2.93	2.93	2.93
Fp	0.04	0.02	0.16	0.05
Fm	0.01	0.00	0.08	0.01
Ybar	0.13	0.07	0.39	0.14
Q-25, CFS	12.5	38.0	11.9	62.6
Q-100, CFS	16.5	50.2	15.9	82.9
VOLUME (P=4.28IN 25YR-24HR), CF	85093	275090	58809	422434
VOLUME (P=5.90IN 100YR-24HR), CF	117301	379213	81068	582327

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
25-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 25.0
Computed rainfall intensity:
Storm year = 25.00 1 hour rainfall = 0.942 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.139(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      3.479(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.864
      Subarea runoff =     18.908(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.139(In/Hr)
```

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      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ____________________________________________________________________
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    18.908(CFS)
      Nearest computed pipe diameter  =     24.00(In.)
      Calculated individual pipe flow  =    18.908(CFS)
      Normal flow depth in pipe =   19.31(In.)
      Flow top width inside pipe =   19.03(In.)
      Critical Depth =   18.77(In.)
      Pipe flow velocity =      6.97(Ft/s)
      Travel time through pipe =    3.31 min.
      Time of concentration (TC) =    12.59 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.073(In/Hr)
      Time of concentration =    12.59 min.
      Rainfall intensity =      2.810(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.871
      Subarea runoff =     43.201(CFS) for   19.080(Ac.)
      Total runoff =     62.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.090(In/Hr)
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    62.109(CFS)
      Nearest computed pipe diameter  =     33.00(In.)
      Calculated individual pipe flow  =    62.109(CFS)
      Normal flow depth in pipe =   25.27(In.)
      Flow top width inside pipe =   27.96(In.)
      Critical Depth =   30.18(In.)
      Pipe flow velocity =     12.74(Ft/s)
      Travel time through pipe =    0.88 min.
      Time of concentration (TC) =    13.47 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.382(In/Hr)
      Time of concentration =    13.47 min.
      Rainfall intensity =      2.680(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.851
      Subarea runoff =      9.891(CFS) for    6.220(Ac.)
      Total runoff =     72.000(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.147(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
100-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.250 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.084(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      4.617(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
      Subarea runoff =     25.664(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.084(In/Hr)
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    25.664(CFS)
      Nearest computed pipe diameter  =     27.00(In.)
      Calculated individual pipe flow  =    25.664(CFS)
      Normal flow depth in pipe =   21.56(In.)
      Flow top width inside pipe =   21.66(In.)
      Critical Depth =   21.24(In.)
      Pipe flow velocity =      7.54(Ft/s)
      Travel time through pipe =    3.06 min.
      Time of concentration (TC) =    12.34 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.044(In/Hr)
      Time of concentration =    12.34 min.
      Rainfall intensity =      3.781(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.887
      Subarea runoff =     59.445(CFS) for   19.080(Ac.)
      Total runoff =     85.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.054(In/Hr)
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    85.109(CFS)
      Nearest computed pipe diameter  =     39.00(In.)
      Calculated individual pipe flow  =    85.109(CFS)
      Normal flow depth in pipe =   26.86(In.)
      Flow top width inside pipe =   36.12(In.)
      Critical Depth =   34.49(In.)
      Pipe flow velocity =     13.98(Ft/s)
      Travel time through pipe =    0.80 min.
      Time of concentration (TC) =    13.15 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.229(In/Hr)
      Time of concentration =    13.15 min.
      Rainfall intensity =      3.618(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.878
      Subarea runoff =     15.238(CFS) for    6.220(Ac.)
      Total runoff =    100.347(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.088(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 07/15/22

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San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6277

2021-196 Hesperia Spec Industrial
Unit Hydrograph
100-year

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
0.01	1	0.75
Rainfall data for year 2		
0.01	6	1.01
Rainfall data for year 2		
0.01	24	1.89

```
--
      Rainfall data for year 100
                0.01            1           1.25
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01            6           2.81
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01           24           5.90
      ------------------------------------------------------------------
--
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++

      ******** Area-averaged max loss rate, Fm ********


      SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap
Fm
      No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)
(In/Hr)
       56.0      75.8         31.59      1.000     0.440    0.200
0.088

      Area-averaged adjusted loss rate Fm (In/Hr) =  0.088

      ********* Area-Averaged low loss rate fraction, Yb **********

      Area       Area          SCS CN    SCS CN      S     Pervious
       (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
           6.32   0.200         56.0      75.8       3.19     0.555
          25.27   0.800         98.0      98.0       0.20     0.960

      Area-averaged catchment yield fraction, Y =  0.879
      Area-averaged low loss fraction, Yb =  0.121
      User entry of time of concentration  =   0.227 (hours)
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
      Watershed area =      31.59(Ac.)
      Catchment Lag time =   0.182 hours
      Unit interval =   5.000 minutes
      Unit interval percentage of lag time = 45.8884
      Hydrograph baseflow =     0.00(CFS)
      Average maximum watershed loss rate(Fm) =  0.088(In/Hr)
      Average low loss rate fraction (Yb) = 0.121 (decimal)
      MOUNTAIN S-Graph Selected
      Computed peak 5-minute rainfall =  0.593(In)
      Computed peak 30-minute rainfall =  1.015(In)
      Specified peak 1-hour rainfall =  1.250(In)
      Computed peak 3-hour rainfall =  2.054(In)
      Specified peak 6-hour rainfall =  2.810(In)
      Specified peak 24-hour rainfall =  5.900(In)
```

```
      Rainfall depth area reduction factors:
      Using a total area of      31.59(Ac.) (Ref: fig. E-4)

      5-minute factor = 0.999     Adjusted rainfall =  0.592(In)
      30-minute factor = 0.999    Adjusted rainfall =  1.014(In)
      1-hour factor = 0.999       Adjusted rainfall =  1.248(In)
      3-hour factor = 1.000       Adjusted rainfall =  2.054(In)
      6-hour factor = 1.000       Adjusted rainfall =  2.810(In)
      24-hour factor = 1.000      Adjusted rainfall =  5.900(In)
      ------------------------------------------------------------------
---

                     U n i t  H y d r o g r a p h
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+++
      Interval          'S' Graph          Unit Hydrograph
      Number            Mean values             ((CFS))
      ------------------------------------------------------------------
---
                (K =       382.04 (CFS))

        1                6.828                  26.086
        2               34.241                 104.729
        3               53.812                  74.769
        4               63.412                  36.675
        5               69.929                  24.899
        6               74.936                  19.129
        7               78.803                  14.773
        8               81.823                  11.537
        9               84.264                   9.327
       10               86.308                   7.807
       11               88.171                   7.119
       12               89.787                   6.173
       13               91.208                   5.430
       14               92.506                   4.960
       15               93.668                   4.438
       16               94.719                   4.017
       17               95.623                   3.454
       18               96.455                   3.176
       19               97.281                   3.156
       20               98.107                   3.156
       21               98.933                   3.156
       22              100.000                   1.578
      ------------------------------------------------------------------
---
      ------------------------------------------------------------------
--
      ------------------------------------------------------------------
--
      Total soil rain loss =      0.64(In)
      Total effective rainfall =      5.26(In)
      Peak flow rate in flood hydrograph =     81.24(CFS)
      ------------------------------------------------------------------
---
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
```

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	22.5	45.0	67.5	90.0
0+ 5	0.0017	0.25	Q				
0+10	0.0104	1.26	Q				
0+15	0.0241	1.98	Q				
0+20	0.0402	2.34	VQ				
0+25	0.0581	2.59	VQ				
0+30	0.0772	2.78	VQ				
0+35	0.0974	2.93	VQ				
0+40	0.1184	3.05	VQ				
0+45	0.1400	3.14	VQ				
0+50	0.1622	3.23	VQ				
0+55	0.1850	3.30	VQ				
1+ 0	0.2082	3.37	VQ				
1+ 5	0.2319	3.43	VQ				
1+10	0.2559	3.49	VQ				
1+15	0.2803	3.54	VQ				
1+20	0.3050	3.59	VQ				
1+25	0.3300	3.63	VQ				
1+30	0.3553	3.67	|Q				
1+35	0.3809	3.71	|Q				
1+40	0.4067	3.75	|Q				
1+45	0.4328	3.79	|Q				
1+50	0.4591	3.82	|Q				

1+55	0.4855	3.83	|Q	|	|	|
2+ 0	0.5119	3.84	|Q	|	|	|
2+ 5	0.5384	3.85	|Q	|	|	|
2+10	0.5650	3.86	|Q	|	|	|
2+15	0.5917	3.87	|Q	|	|	|
2+20	0.6184	3.88	|Q	|	|	|
2+25	0.6452	3.89	|Q	|	|	|
2+30	0.6721	3.90	|Q	|	|	|
2+35	0.6990	3.91	|QV	|	|	|
2+40	0.7260	3.92	|QV	|	|	|
2+45	0.7531	3.93	|QV	|	|	|
2+50	0.7803	3.95	|QV	|	|	|
2+55	0.8076	3.96	|QV	|	|	|
3+ 0	0.8349	3.97	|QV	|	|	|
3+ 5	0.8623	3.98	|QV	|	|	|
3+10	0.8898	3.99	|QV	|	|	|
3+15	0.9174	4.00	|QV	|	|	|
3+20	0.9450	4.02	|QV	|	|	|
3+25	0.9728	4.03	|QV	|	|	|
3+30	1.0006	4.04	|QV	|	|	|
3+35	1.0285	4.05	|QV	|	|	|
3+40	1.0565	4.06	|Q V	|	|	|
3+45	1.0845	4.08	|Q V	|	|	|
3+50	1.1127	4.09	|Q V	|	|	|
3+55	1.1410	4.10	|Q V	|	|	|
4+ 0	1.1693	4.11	|Q V	|	|	|
4+ 5	1.1977	4.13	|Q V	|	|	|
4+10	1.2262	4.14	|Q V	|	|	|

4+15	1.2548	4.15	|Q V	|	|	|
4+20	1.2835	4.17	|Q V	|	|	|
4+25	1.3123	4.18	|Q V	|	|	|
4+30	1.3412	4.19	|Q V	|	|	|
4+35	1.3702	4.21	|Q V	|	|	|
4+40	1.3993	4.22	|Q V	|	|	|
4+45	1.4284	4.24	|Q V	|	|	|
4+50	1.4577	4.25	|Q V	|	|	|
4+55	1.4871	4.26	|Q V	|	|	|
5+ 0	1.5165	4.28	|Q V	|	|	|
5+ 5	1.5461	4.29	|Q V	|	|	|
5+10	1.5758	4.31	|Q V	|	|	|
5+15	1.6055	4.32	|Q V	|	|	|
5+20	1.6354	4.34	|Q V	|	|	|
5+25	1.6654	4.35	|Q V	|	|	|
5+30	1.6955	4.37	|Q V	|	|	|
5+35	1.7257	4.38	|Q V	|	|	|
5+40	1.7560	4.40	|Q V	|	|	|
5+45	1.7864	4.42	|Q V	|	|	|
5+50	1.8169	4.43	|Q V	|	|	|
5+55	1.8475	4.45	|Q V	|	|	|
6+ 0	1.8783	4.47	|Q V	|	|	|
6+ 5	1.9092	4.48	|Q V	|	|	|
6+10	1.9401	4.50	|Q V	|	|	|
6+15	1.9712	4.52	| Q V	|	|	|
6+20	2.0025	4.53	| Q V	|	|	|
6+25	2.0338	4.55	| Q V	|	|	|
6+30	2.0653	4.57	| Q V	|	|	|

6+35	2.0969	4.59	Q	V			
6+40	2.1286	4.60	Q	V			
6+45	2.1604	4.62	Q	V			
6+50	2.1924	4.64	Q	V			
6+55	2.2245	4.66	Q	V			
7+ 0	2.2567	4.68	Q	V			
7+ 5	2.2891	4.70	Q	V			
7+10	2.3216	4.72	Q	V			
7+15	2.3542	4.74	Q	V			
7+20	2.3870	4.76	Q	V			
7+25	2.4199	4.78	Q	V			
7+30	2.4530	4.80	Q	V			
7+35	2.4862	4.82	Q	V			
7+40	2.5195	4.84	Q	V			
7+45	2.5530	4.86	Q	V			
7+50	2.5867	4.89	Q	V			
7+55	2.6205	4.91	Q	V			
8+ 0	2.6544	4.93	Q	V			
8+ 5	2.6886	4.95	Q	V			
8+10	2.7228	4.98	Q	V			
8+15	2.7573	5.00	Q	V			
8+20	2.7919	5.03	Q	V			
8+25	2.8267	5.05	Q	V			
8+30	2.8616	5.07	Q	V			
8+35	2.8967	5.10	Q	V			
8+40	2.9320	5.12	Q	V			
8+45	2.9675	5.15	Q	V			
8+50	3.0032	5.18	Q	V			

8+55	3.0390	5.20	Q	V			
9+ 0	3.0750	5.23	Q	V			
9+ 5	3.1112	5.26	Q	V			
9+10	3.1476	5.29	Q	V			
9+15	3.1842	5.31	Q	V			
9+20	3.2211	5.34	Q	V			
9+25	3.2581	5.37	Q	V			
9+30	3.2953	5.40	Q	V			
9+35	3.3327	5.43	Q	V			
9+40	3.3704	5.47	Q	V			
9+45	3.4082	5.50	Q	V			
9+50	3.4463	5.53	Q	V			
9+55	3.4846	5.56	Q	V			
10+ 0	3.5232	5.60	Q	V			
10+ 5	3.5619	5.63	Q	V			
10+10	3.6010	5.67	Q	V			
10+15	3.6402	5.70	Q	V			
10+20	3.6797	5.74	Q	V			
10+25	3.7195	5.77	Q	V			
10+30	3.7595	5.81	Q	V			
10+35	3.7998	5.85	Q	V			
10+40	3.8404	5.89	Q	V			
10+45	3.8813	5.93	Q	V			
10+50	3.9224	5.97	Q	V			
10+55	3.9638	6.01	Q	V			
11+ 0	4.0055	6.06	Q	V			
11+ 5	4.0476	6.10	Q	V			
11+10	4.0899	6.15	Q	V			

11+15	4.1326	6.19	Q	V		
11+20	4.1755	6.24	Q	V		
11+25	4.2188	6.29	Q	V		
11+30	4.2625	6.34	Q	V		
11+35	4.3065	6.39	Q	V		
11+40	4.3509	6.44	Q	V		
11+45	4.3956	6.49	Q	V		
11+50	4.4407	6.55	Q	V		
11+55	4.4862	6.61	Q	V		
12+ 0	4.5321	6.67	Q	V		
12+ 5	4.5779	6.65	Q	V		
12+10	4.6221	6.42	Q	V		
12+15	4.6653	6.27	Q	V		
12+20	4.7082	6.23	Q	V		
12+25	4.7510	6.22	Q	V		
12+30	4.7940	6.24	Q	V		
12+35	4.8372	6.27	Q	V		
12+40	4.8806	6.31	Q	V		
12+45	4.9244	6.36	Q	V		
12+50	4.9686	6.42	Q	V		
12+55	5.0133	6.48	Q	V		
13+ 0	5.0584	6.55	Q	V		
13+ 5	5.1040	6.62	Q	V		
13+10	5.1501	6.70	Q	V		
13+15	5.1969	6.78	Q	V		
13+20	5.2442	6.88	Q	V		
13+25	5.2922	6.97	Q	V		
13+30	5.3409	7.07	Q	V		

13+35	5.3903	7.18	Q	V		
13+40	5.4406	7.29	Q	V		
13+45	5.4916	7.41	Q	V		
13+50	5.5435	7.54	Q	V		
13+55	5.5963	7.67	Q	V		
14+ 0	5.6502	7.83	Q	V		
14+ 5	5.7052	7.98	Q	V		
14+10	5.7613	8.16	Q	V		
14+15	5.8187	8.33	Q	V		
14+20	5.8774	8.53	Q	V		
14+25	5.9375	8.72	Q	V		
14+30	5.9991	8.94	Q	V		
14+35	6.0623	9.17	Q	V		
14+40	6.1272	9.43	Q	V		
14+45	6.1939	9.69	Q	V		
14+50	6.2627	9.99	Q	V		
14+55	6.3336	10.30	Q	V		
15+ 0	6.4071	10.66	Q	V		
15+ 5	6.4831	11.04	Q	V		
15+10	6.5623	11.49	Q	V		
15+15	6.6447	11.97	Q	V		
15+20	6.7311	12.54	Q	V		
15+25	6.8192	12.79	Q	V		
15+30	6.9024	12.08	Q	V		
15+35	6.9840	11.84	Q	V		
15+40	7.0691	12.36	Q	V		
15+45	7.1603	13.25	Q	V		
15+50	7.2622	14.79	Q	V		

| | | |

18+15	11.3300	6.96	Q			V
18+20	11.3774	6.89	Q			V
18+25	11.4242	6.80	Q			V
18+30	11.4704	6.70	Q			V
18+35	11.5158	6.60	Q			V
18+40	11.5606	6.50	Q			V
18+45	11.6048	6.41	Q			V
18+50	11.6483	6.32	Q			V
18+55	11.6912	6.23	Q			V
19+ 0	11.7335	6.15	Q			V
19+ 5	11.7753	6.06	Q			V
19+10	11.8165	5.99	Q			V
19+15	11.8572	5.91	Q			V
19+20	11.8974	5.84	Q			V
19+25	11.9372	5.77	Q			V
19+30	11.9764	5.70	Q			V
19+35	12.0153	5.64	Q			V
19+40	12.0537	5.58	Q			V
19+45	12.0917	5.52	Q			V
19+50	12.1293	5.46	Q			V
19+55	12.1665	5.40	Q			V
20+ 0	12.2032	5.34	Q			V
20+ 5	12.2396	5.28	Q			V
20+10	12.2756	5.22	Q			V
20+15	12.3112	5.17	Q			V
20+20	12.3464	5.12	Q			V
20+25	12.3813	5.07	Q			V
20+30	12.4158	5.02	Q			V

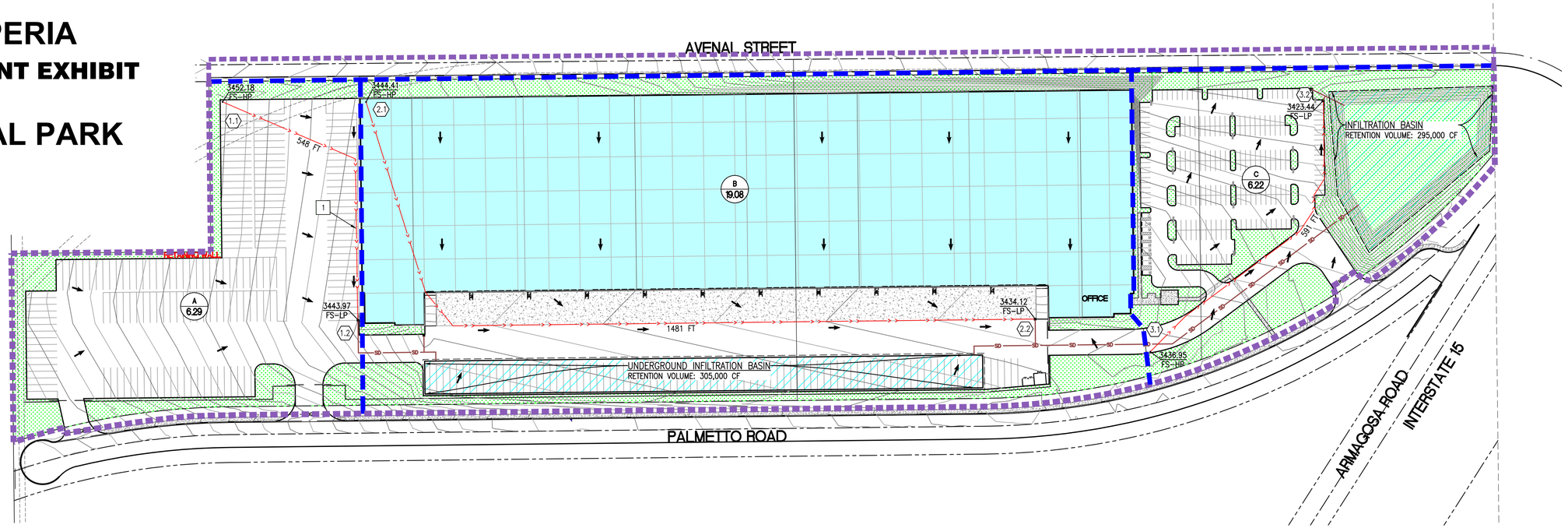
20+35	12.4500	4.97	Q				V
20+40	12.4839	4.92	Q				V
20+45	12.5175	4.88	Q				V
20+50	12.5508	4.83	Q				V
20+55	12.5838	4.79	Q				V
21+ 0	12.6165	4.75	Q				V
21+ 5	12.6490	4.71	Q				V
21+10	12.6812	4.67	Q				V
21+15	12.7131	4.63	Q				V
21+20	12.7447	4.60	Q				V
21+25	12.7761	4.56	Q				V
21+30	12.8073	4.52	Q				V
21+35	12.8382	4.49	Q				V
21+40	12.8689	4.46	Q				V
21+45	12.8994	4.42	Q				V
21+50	12.9296	4.39	Q				V
21+55	12.9596	4.36	Q				V
22+ 0	12.9894	4.33	Q				V
22+ 5	13.0191	4.30	Q				V
22+10	13.0485	4.27	Q				V
22+15	13.0777	4.24	Q				V
22+20	13.1067	4.21	Q				V
22+25	13.1355	4.19	Q				V
22+30	13.1642	4.16	Q				V
22+35	13.1926	4.13	Q				V
22+40	13.2209	4.11	Q				V
22+45	13.2490	4.08	Q				V
22+50	13.2770	4.06	Q				V

```
   22+55      13.3047      4.03  |Q        |         |         |        V
|
   23+ 0      13.3323      4.01  |Q        |         |         |        V
|
   23+ 5      13.3598      3.98  |Q        |         |         |        V
|
   23+10      13.3871      3.96  |Q        |         |         |        V
|
   23+15      13.4142      3.94  |Q        |         |         |        V
|
   23+20      13.4412      3.92  |Q        |         |         |
V|
   23+25      13.4680      3.89  |Q        |         |         |
V|
   23+30      13.4947      3.87  |Q        |         |         |
V|
   23+35      13.5212      3.85  |Q        |         |         |
V|
   23+40      13.5476      3.83  |Q        |         |         |
V|
   23+45      13.5738      3.81  |Q        |         |         |
V|
   23+50      13.5999      3.79  |Q        |         |         |
V|
   23+55      13.6259      3.77  |Q        |         |         |
V|
   24+ 0      13.6518      3.75  |Q        |         |         |
V|
   24+ 5      13.6757      3.48  |Q        |         |         |
V|
   24+10      13.6926      2.46  |Q        |         |         |
V|
   24+15      13.7045      1.72  Q         |         |         |
V|
   24+20      13.7139      1.36  Q         |         |         |
V|
   24+25      13.7216      1.12  Q         |         |         |
V|
   24+30      13.7280      0.93  Q         |         |         |
V|
   24+35      13.7333      0.78  Q         |         |         |
V|
   24+40      13.7379      0.66  Q         |         |         |
V|
   24+45      13.7418      0.57  Q         |         |         |
V|
   24+50      13.7452      0.49  Q         |         |         |
V|
   24+55      13.7481      0.42  Q         |         |         |
V|
   25+ 0      13.7506      0.36  Q         |         |         |
V|
   25+ 5      13.7527      0.31  Q         |         |         |
V|
   25+10      13.7545      0.26  Q         |         |         |
V|
```

```
   25+15      13.7559      0.21  Q         |         |         |
V|
   25+20      13.7571      0.17  Q         |         |         |
V|
   25+25      13.7581      0.14  Q         |         |         |
V|
   25+30      13.7588      0.11  Q         |         |         |
V|
   25+35      13.7594      0.08  Q         |         |         |
V|
   25+40      13.7597      0.05  Q         |         |         |
V|
   25+45      13.7598      0.02  Q         |         |         |
V
------------------------------------------------------------------------
```

Appendix B

CITY OF HESPERIA
POST DEVELOPMENT EXHIBIT
FOR
SPEC INDUSTRIAL PARK



HYDROLOGY INFORMATION

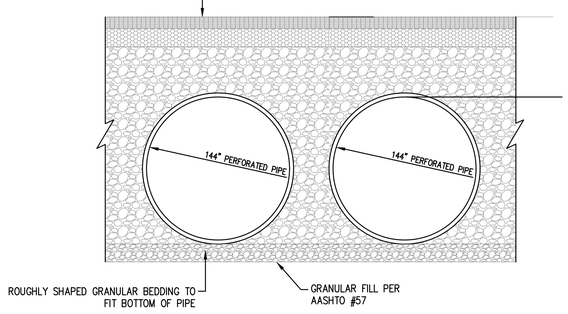
SITE AREA:	31± ACRES	
SOIL GROUP:	B	(PER USDA WEB SOIL SURVEY)
IMPERVIOUS:	80%	(PER CALCULATIONS)
ISOHYETALS:	0.433" 1.25"	(2-YEAR 1 HOUR) (100-YEAR 1 HOUR)
CN NUMBER:	78	(SOIL GROUP B)
FREQUENCY:	100 YEAR 2/10 YEAR	(FOR STORM DRAIN DESIGN) (FOR WATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

LEGEND:

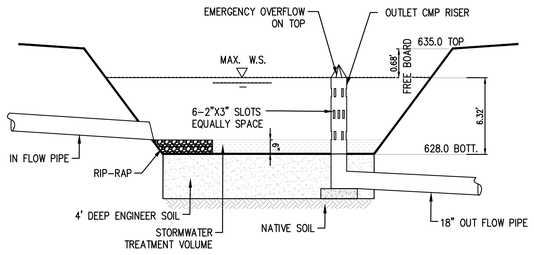
- DRAINAGE AREA/SITE BOUNDARY
- DRAINAGE SUB-AREA BOUNDARY
- STORM WATER FLOW PATH
- PROPOSED STORM DRAIN PIPE
- PROPOSED FLOW DIRECTION ARROW
- DRAINAGE AREA DESIGNATION (X / XXX = AREA(AC))
- NODE (US/DS) (X.X)
- STREAM # (3)
- PROPOSED UNDERGROUND INFILTRATION/DETENTION
- PROPOSED BUILDING
- PROPOSED LANDSCAPING

DRAINAGE NOTES:

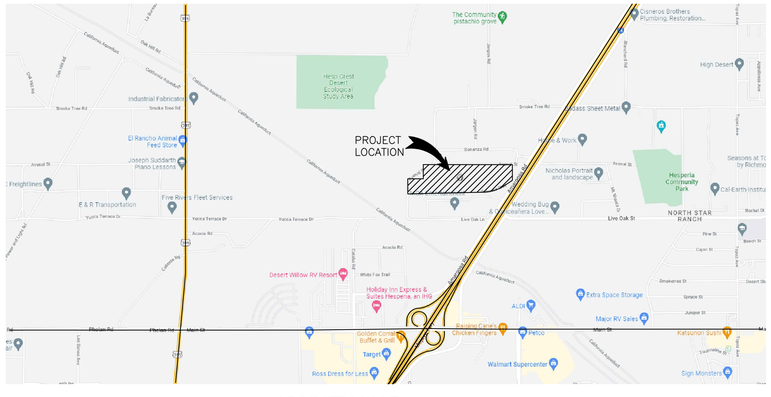
1. PROPOSED STORM DRAIN INLET
2. PROPOSED STORM DRAIN
3. PROPOSED INFILTRATION/DETENTION BASIN
4. PROPOSED UNDERGROUND INFILTRATION CMP



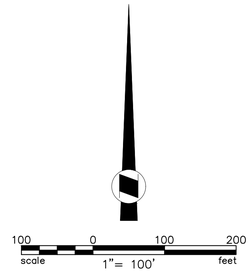
TYPICAL CMP UNDERGROUND INFILTRATION DETAIL
N.T.S



INFILTRATION/DETENTION BASIN-3 DETAIL
N.T.S



VICINITY MAP
N.T.S



PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2019-185

HCCII INDUSTRIAL PARK HYDROLOGY EXHIBIT

CITY OF HESPERIA

DATE: DEC 2021
SHEET 1 OF 1

Drawing Name: P:\Year_2021\2021-196 Hesperia Industrial - RDA - Chris Sovage\06 Engineering\Reports\Hydrology\3_Exhibits\2021-196_Hydro_Exhibit_Post.dwg
Last Opened: Jul 06, 2022 - 9:28pm by: lucas.glauser

Appendix C

NOAA Atlas 14, Volume 6, Version 2
Location name: Hesperia, California, USA*
Latitude: 34.4371°, Longitude: -117.3766°
Elevation: 3440.77 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.083** (0.068-0.101)	**0.118** (0.098-0.145)	**0.166** (0.136-0.203)	**0.204** (0.167-0.252)	**0.257** (0.203-0.329)	**0.299** (0.231-0.390)	**0.341** (0.257-0.456)	**0.385** (0.283-0.529)	**0.445** (0.314-0.638)	**0.493** (0.335-0.731)
10-min	**0.118** (0.098-0.145)	**0.170** (0.140-0.207)	**0.237** (0.196-0.291)	**0.293** (0.239-0.362)	**0.369** (0.292-0.471)	**0.428** (0.331-0.558)	**0.488** (0.369-0.653)	**0.552** (0.405-0.759)	**0.638** (0.449-0.915)	**0.706** (0.481-1.05)
15-min	**0.143** (0.119-0.175)	**0.205** (0.170-0.251)	**0.287** (0.236-0.352)	**0.354** (0.289-0.437)	**0.446** (0.353-0.570)	**0.517** (0.400-0.675)	**0.591** (0.446-0.790)	**0.667** (0.490-0.917)	**0.772** (0.544-1.11)	**0.854** (0.581-1.27)
30-min	**0.217** (0.180-0.265)	**0.311** (0.257-0.380)	**0.435** (0.359-0.533)	**0.537** (0.439-0.664)	**0.677** (0.535-0.865)	**0.785** (0.608-1.02)	**0.896** (0.677-1.20)	**1.01** (0.743-1.39)	**1.17** (0.824-1.68)	**1.30** (0.881-1.92)
60-min	**0.302** (0.250-0.369)	**0.433** (0.358-0.530)	**0.606** (0.499-0.743)	**0.747** (0.611-0.924)	**0.942** (0.744-1.20)	**1.09** (0.846-1.43)	**1.25** (0.942-1.67)	**1.41** (1.03-1.94)	**1.63** (1.15-2.34)	**1.80** (1.23-2.68)
2-hr	**0.434** (0.359-0.530)	**0.590** (0.488-0.722)	**0.802** (0.661-0.983)	**0.979** (0.800-1.21)	**1.23** (0.971-1.57)	**1.43** (1.11-1.86)	**1.64** (1.24-2.19)	**1.86** (1.36-2.55)	**2.17** (1.53-3.11)	**2.42** (1.64-3.58)
3-hr	**0.548** (0.453-0.669)	**0.733** (0.605-0.895)	**0.985** (0.812-1.21)	**1.20** (0.981-1.48)	**1.51** (1.19-1.92)	**1.75** (1.36-2.29)	**2.01** (1.52-2.69)	**2.29** (1.68-3.15)	**2.69** (1.89-3.85)	**3.01** (2.05-4.47)
6-hr	**0.766** (0.634-0.935)	**1.01** (0.838-1.24)	**1.36** (1.12-1.67)	**1.66** (1.35-2.05)	**2.09** (1.65-2.66)	**2.44** (1.89-3.18)	**2.81** (2.12-3.76)	**3.22** (2.37-4.43)	**3.81** (2.69-5.46)	**4.30** (2.93-6.38)
12-hr	**0.980** (0.811-1.20)	**1.34** (1.11-1.64)	**1.84** (1.51-2.25)	**2.27** (1.85-2.80)	**2.88** (2.28-3.69)	**3.39** (2.63-4.43)	**3.93** (2.97-5.26)	**4.53** (3.32-6.23)	**5.38** (3.79-7.72)	**6.09** (4.15-9.04)
24-hr	**1.34** (1.19-1.54)	**1.89** (1.68-2.18)	**2.66** (2.35-3.08)	**3.33** (2.91-3.88)	**4.28** (3.63-5.16)	**5.06** (4.20-6.22)	**5.90** (4.78-7.43)	**6.80** (5.36-8.81)	**8.11** (6.13-11.0)	**9.20** (6.72-12.8)
2-day	**1.50** (1.33-1.72)	**2.11** (1.87-2.44)	**2.98** (2.63-3.44)	**3.72** (3.26-4.34)	**4.81** (4.08-5.80)	**5.71** (4.74-7.03)	**6.69** (5.42-8.42)	**7.75** (6.10-10.0)	**9.30** (7.03-12.6)	**10.6** (7.74-14.8)
3-day	**1.60** (1.42-1.84)	**2.25** (1.99-2.60)	**3.17** (2.80-3.66)	**3.96** (3.47-4.62)	**5.13** (4.35-6.18)	**6.10** (5.06-7.50)	**7.15** (5.79-9.01)	**8.31** (6.54-10.8)	**10.00** (7.56-13.5)	**11.4** (8.34-15.9)
4-day	**1.73** (1.53-1.99)	**2.42** (2.15-2.79)	**3.40** (3.00-3.93)	**4.26** (3.73-4.96)	**5.51** (4.67-6.63)	**6.55** (5.43-8.05)	**7.67** (6.22-9.67)	**8.91** (7.02-11.5)	**10.7** (8.11-14.5)	**12.3** (8.96-17.1)
7-day	**1.92** (1.70-2.21)	**2.66** (2.36-3.07)	**3.71** (3.28-4.29)	**4.62** (4.05-5.38)	**5.95** (5.04-7.16)	**7.05** (5.85-8.66)	**8.24** (6.67-10.4)	**9.54** (7.52-12.4)	**11.4** (8.65-15.4)	**13.0** (9.53-18.2)
10-day	**2.05** (1.82-2.36)	**2.84** (2.52-3.27)	**3.94** (3.48-4.55)	**4.89** (4.28-5.70)	**6.27** (5.31-7.55)	**7.41** (6.15-9.11)	**8.64** (7.00-10.9)	**9.99** (7.87-12.9)	**12.0** (9.04-16.1)	**13.6** (9.93-19.0)
20-day	**2.49** (2.21-2.87)	**3.42** (3.03-3.94)	**4.71** (4.16-5.44)	**5.82** (5.10-6.78)	**7.43** (6.30-8.95)	**8.76** (7.27-10.8)	**10.2** (8.25-12.8)	**11.7** (9.25-15.2)	**14.0** (10.6-18.9)	**15.9** (11.6-22.2)
30-day	**2.94** (2.60-3.38)	**4.00** (3.54-4.61)	**5.48** (4.84-6.33)	**6.75** (5.91-7.87)	**8.59** (7.28-10.3)	**10.1** (8.39-12.4)	**11.7** (9.50-14.8)	**13.5** (10.6-17.5)	**16.1** (12.2-21.7)	**18.3** (13.4-25.5)
45-day	**3.48** (3.08-4.00)	**4.68** (4.14-5.39)	**6.34** (5.60-7.33)	**7.78** (6.81-9.06)	**9.85** (8.35-11.9)	**11.5** (9.59-14.2)	**13.4** (10.8-16.9)	**15.4** (12.1-20.0)	**18.3** (13.9-24.8)	**20.8** (15.2-29.1)
60-day	**3.95** (3.50-4.55)	**5.24** (4.64-6.03)	**7.01** (6.19-8.11)	**8.55** (7.48-9.96)	**10.8** (9.12-13.0)	**12.6** (10.4-15.5)	**14.6** (11.8-18.3)	**16.7** (13.2-21.7)	**19.9** (15.1-26.9)	**22.6** (16.5-31.6)

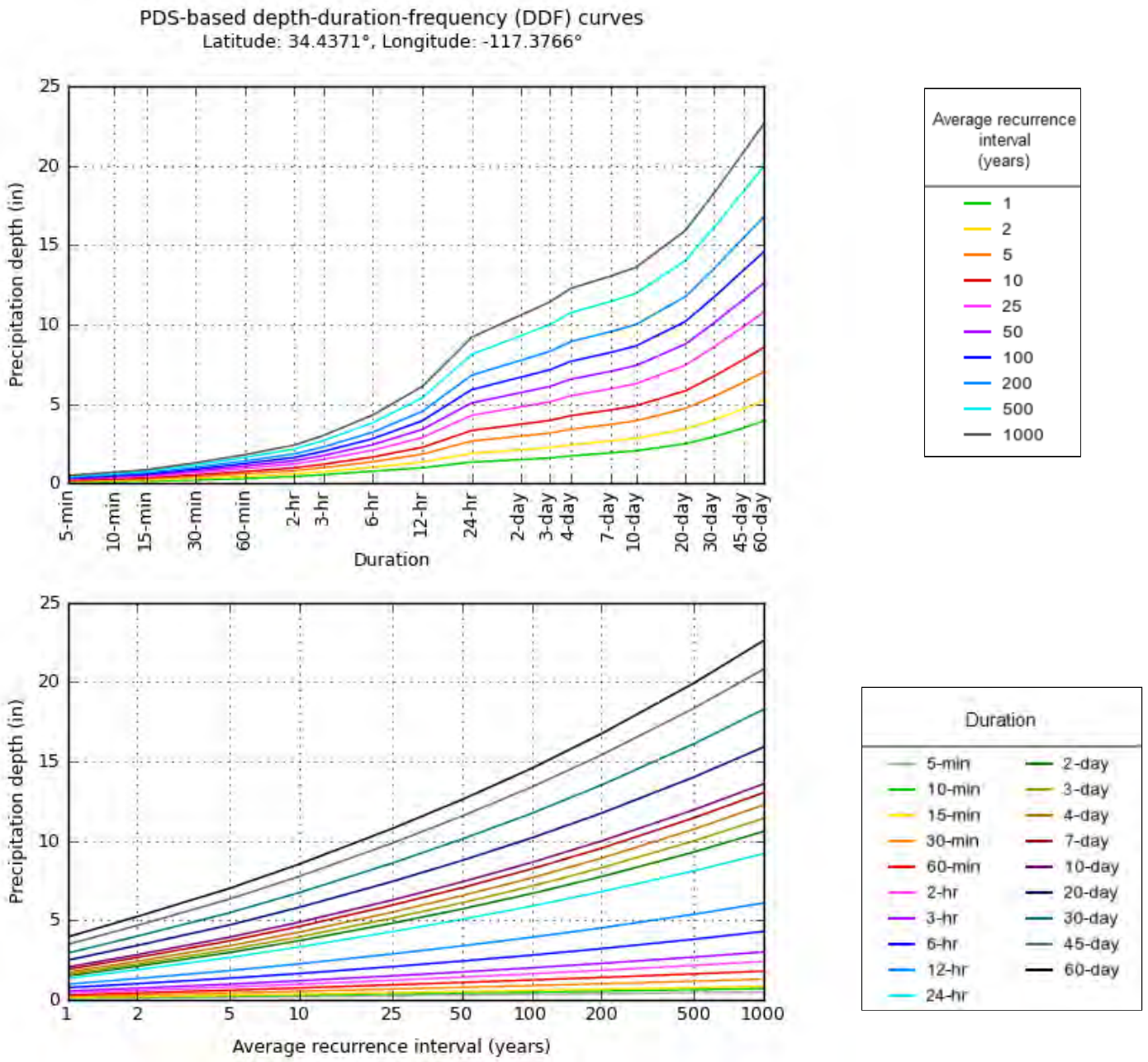
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



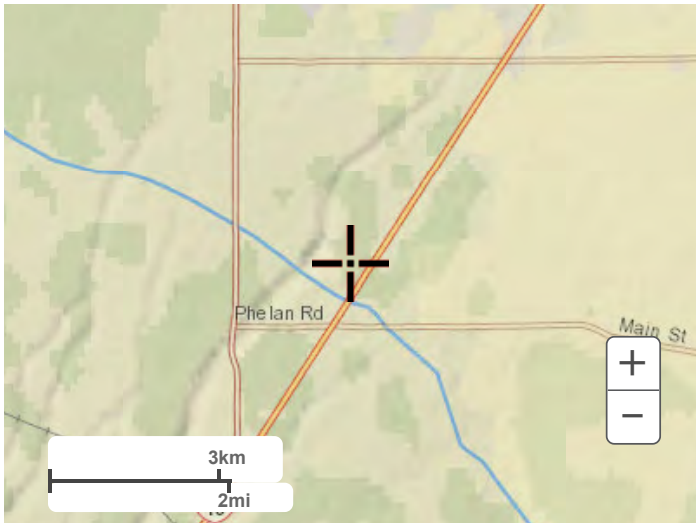
NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Wed Jul 6 18:51:42 2022

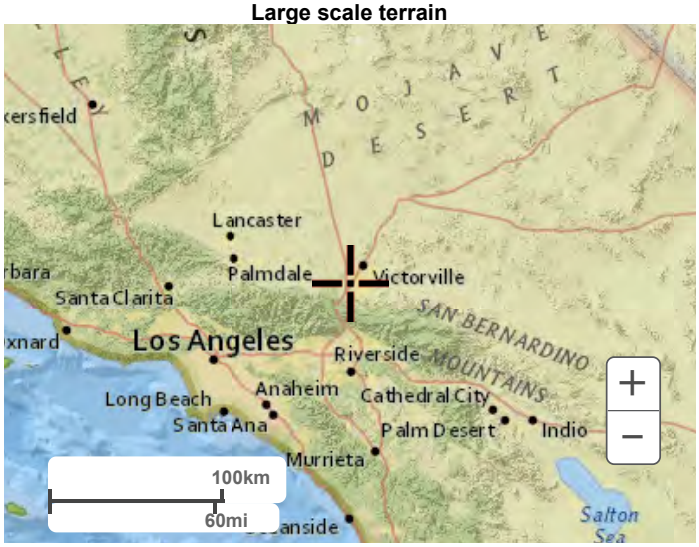
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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



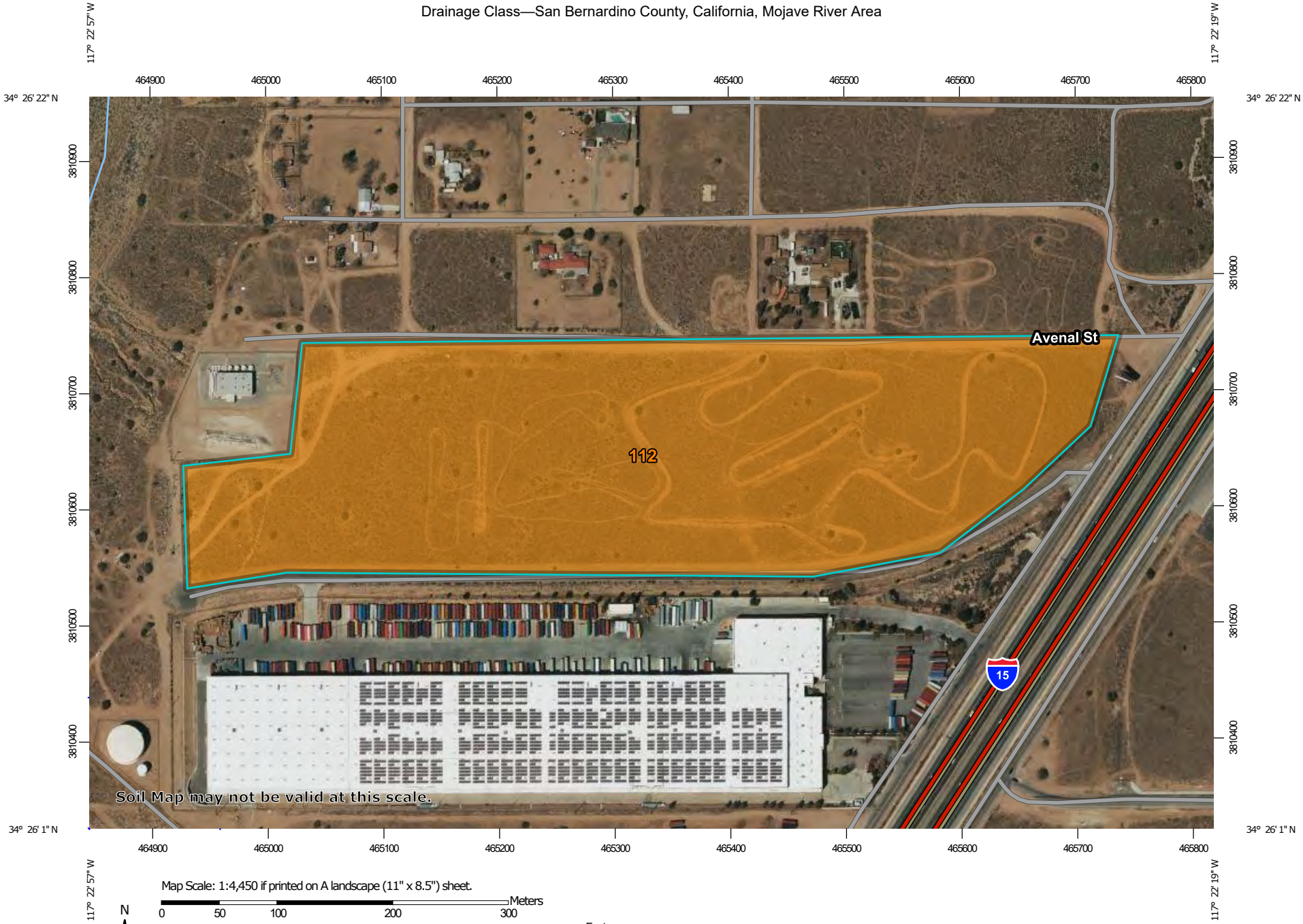
Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer



Map Scale: 1:4,450 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Lines

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Soil Rating Points

- Excessively drained
- Somewhat excessively drained
- Well drained
- Moderately well drained
- Somewhat poorly drained
- Poorly drained
- Very poorly drained
- Subaqueous
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County, California, Mojave River Area
Survey Area Data: Version 13, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 27, 2021—May 24, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Drainage Class

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
112	CAJON SAND, 0 TO 2 PERCENT SLOPES	Somewhat excessively drained	34.8	100.0%
Totals for Area of Interest			**34.8**	**100.0%**

Description

"Drainage class (natural)" refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX I
Conceptual Water Quality Management Plan for Hesperia Spec Industrial

MOJAVE RIVER WATERSHED

Conceptual Water Quality Management Plan

For:

HESPERIA SPEC INDUSTRIAL

WHERE APPLICABLE, INSERT GRADING PERMIT NO., BUILDING PERMIT NO., TRACT NUMBER, LAND DEVELOPMENT FILE NO., CUP, SUP AND/OR APN (SPECIFY LOT NUMBERS IF SITE IS A PORTION OF A TRACT)

Prepared for:

Rachamin 5, LLC

6001 E Slauson Ave

Commerce, CA 90040

(213) 769-4222

Prepared by:

4150 Concours, Suite 100

Ontario, CA 91764

(909) 989-9789

Job Number: 2019-164

Submittal Date: 07-13-20212

Revision No. and Date: Insert No and Current Revision Date

Revision No. and Date: Insert No and Current Revision Date

Revision No. and Date: Insert No and Current Revision Date

Final Approval Date:_____

Project Owner's Certification

This Mojave River Watershed Water Quality Management Plan (WQMP) has been prepared for **Rachamin 5, LLC** by **Westland Group, Inc**. The WQMP is intended to comply with the requirements of the **City of Hesperia** and the Phase II Small MS4 General Permit for the Mojave River Watershed. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the Phase II Small MS4 Permit and the intent of San Bernardino County (unincorporated areas of Phelan, Oak Hills, Spring Valley Lake and Victorville) and the incorporated cities of Hesperia and Victorville and the Town of Apple Valley. Once the undersigned transfers its interest in the property, its successors in interest and the city/county/town shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity.

"I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors."

Project Data			
Permit/Application Number(s):		Grading Permit Number(s):	
Tract/Parcel Map Number(s):	Parcel Map No.	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			

Owner's Signature			
Owner Name: Brandon Gallup			
Title	Project Manager		
Company	Rachamin 5, LLC		
Address	6001 E Slauson Ave., Commerce, CA 90040		
Email			
Telephone #	(213) 769-4222		
Signature		Date	

Preparer's Certification

Project Data			
Permit/Application Number(s):		Grading Permit Number(s):	
Tract/Parcel Map Number(s):	Parcel Map No. 18615	Building Permit Number(s):	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract):			

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan were prepared under my oversight and meet the requirements of the California State Water Resources Control Board Order No. 2013-0001-DWQ.

Engineer: Glenn Chung		PE Stamp Below
Title	Executive Vice President/Principal	
Company	Westland Group, Inc.	
Address	4150 Concours, Suite 100, Ontario, CA 91764	
Email	gchung@westlandgroup.net	
Telephone #	(909) 989-9789	
Signature		
Date		

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Section I – Introduction

This WQMP template has been prepared specifically for the Phase II Small MS4 General Permit in the Mojave River Watershed. This location is within the jurisdiction of the Lahontan Regional Water Quality Control Board (LRWQCB). This document should not be confused with the WQMP template for the Santa Ana Phase I area of San Bernardino County.

WQMP preparers must refer to the MS4 Permit for the Mojave Watershed WQMP template and Technical Guidance (TGD) document found at: http://cms.sbcounty.gov/dpw/Land/NPDES.aspx to find pertinent arid region and Mojave River Watershed specific references and requirements.

Section 1 Discretionary Permit(s)

Form 1-1 Project Information					
Project Name	Hesperia Spec Industrial Center				
Project Owner Contact Name:	Mr. Ramin Namvar				
Mailing Address:	6001 E Slauson Ave	E-mail Address:		Telephone:	(213) 769-4222
Permit/Application Number(s):			Tract/Parcel Map Number(s):	Parcel Map No.	
Additional Information/ Comments:					
Description of Project:	The proposed site is an industrial development located near the northwest corner of Palmeto Way and Amargosa Rd in Hesperia, California. There are no erosive site conditions with a relatively flat topography. The project is currently vacant and undeveloped with the topography displays a drainage pattern via surface flow to the northeast. As runoff is draining northeast via surface flow, it will then flow into the roadside drainage swale and flow north along Amargosa Road. The flows would then eventually lead into the Oro Grande Wash. The proposed site will be considered an industrial development. The flows shall be collected through the nearest catch basin which is conveyed to infiltration/retention basins via a storm drain system. The storm drain system was designed to efficiently direct flow into infiltration/detention basins, as well as a single underground infiltration basin. The proposed project will convey flows into the underground infiltration system and when filled, flows will be conveyed into the infiltration/retention basin. The project proposes to construct a building that will be used for industrial and commercial purposes. The site will have dedicated parking areas and truck docking areas. In addition, for water quality the project proposes to have its own storm drain system that will use the combination of underground and above ground infiltration to treat the stormwater runoff. Part of the project will include offsite improvements that include constructing the parkway along the frontage of the project on Avenal Street.				

Provide summary of Conceptual WQMP conditions (if previously submitted and approved). Attach complete copy.	Not Applicable

Section 2 Project Description

2.1 Project Information

The WQMP shall provide the information listed below. The information provided for Conceptual/ Preliminary WQMP should give sufficient detail to identify the major proposed site design and LID BMPs and other anticipated water quality features that impact site planning. Final Project WQMP must specifically identify all BMP incorporated into the final site design and provide other detailed information as described herein.

The purpose of this information is to help determine the applicable development category, pollutants of concern, watershed description, and long term maintenance responsibilities for the project, and any applicable water quality credits. This information will be used in conjunction with the information in Section 3, Site Description, to establish the performance criteria and to select the LID BMP or other BMP for the project or other alternative programs that the project will participate in, which are described in Section 4.

2.1.1 Project Sizing Categorization

If the Project is greater than 5,000 square feet, and not on the excluded list as found on Section 1.4 of the TGD, the Project is a Regulated Development Project.

If the Project is creating and/or replacing greater than 2,500 square feet but less than 5,000 square feet of impervious surface area, then it is considered a Site Design Only project. This criterion is applicable to all development types including detached single family homes that create and/or replace greater than 2,500 square feet of impervious area and are not part of a larger plan of development.

Form 2.1-1 Description of Proposed Project

1 Regulated Development Project Category (Select all that apply):

☒ #1 New development involving the creation of 5,000 ft^2 or more of impervious surface collectively over entire site	☐ #2 Significant re-development involving the addition or replacement of 5,000 ft^2 or more of impervious surface on an already developed site	☐ #3 Road Project – any road, sidewalk, or bicycle lane project that creates greater than 5,000 square feet of contiguous impervious surface	☐ #4 LUPs – linear underground/overhead projects that has a discrete location with 5,000 sq. ft. or more new constructed impervious surface

☐ Site Design Only (Project Total Square Feet > 2,500 but < 5,000 sq.ft.) *Will require source control Site Design Measures. Use the "PCMP" Template. Do not use this WQMP Template.*

2 Project Area (ft2):	1,376,060	**3** Number of Dwelling Units:		**4** SIC Code:	1541

5 Is Project going to be phased? Yes ☐ No ☒ *If yes, ensure that the WQMP evaluates each phase as a distinct DA, requiring LID BMPs to address runoff at time of completion.*

2.2 Property Ownership/Management

Describe the ownership/management of all portions of the project and site. State whether any infrastructure will transfer to public agencies (City, County, Caltrans, etc.) after project completion. State if a homeowners or property owners association will be formed and be responsible for the long-term maintenance of project stormwater facilities. Describe any lot-level stormwater features that will be the responsibility of individual property owners.

Form 2.2-1 Property Ownership/Management

Describe property ownership/management responsible for long-term maintenance of WQMP stormwater facilities:

Maintenance of the WQMP facilities will be the sole responsibility of the property owner:

Rachamin 5, LLC
6001 E Slauson Ave
Commerce, CA 90040
Contact: Mr. Ramin Namvar
Phone: (213) 769-4222

The owner may choose to contract the appropriate employers for the maintenance of stormwater to whom will provide the proper equipment if the current owners to not have the proper equipment and/or knowledge to do so.
Any future property owner(s) whom will succeed Rachamin 5 as the entity responsible for long term maintenance.
No infrastructure will be transferred to a public agency after completion. Refer to Section 5 of this WQMP report for detailed maintenance activities.

2.3 Potential Stormwater Pollutants

Best Management Practices (BMP) measures for pollutant generating activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment (or an equivalent manual). Pollutant generating activities must be considered when determining the overall pollutants of concern for the Project as presented in Form 2.3-1.

Determine and describe expected stormwater pollutants of concern based on land uses and site activities (refer to Table 3-2 in the TGD for WQMP).

Form 2.3-1 Pollutants of Concern

Pollutant	Please check: E=Expected, N=Not Expected		Additional Information and Comments
Pathogens (Bacterial / Virus)	E ☒	N ☐	Wild Bird and Pet Waste, Garbage
Nutrients - Phosphorous	E ☒	N ☐	Fertilizers, Food Waste, & Garbage
Nutrients - Nitrogen	E ☒	N ☐	Fertilizer & Waste
Noxious Aquatic Plants	E ☐	N ☒	The proposed development does not include any areas where water will be standing long enough to allow the growth of aquatic plants.
Sediment	E ☒	N ☐	Driveways, Rooftops, Sidewalks, Paved areas & landscape
Metals	E ☒	N ☐	Cars, Trucks & Parking Areas
Oil and Grease	E ☒	N ☐	Leaking Vehicles & Parking Areas
Trash/Debris	E ☒	N ☐	Poorly managed Trash Container & Parking area
Pesticides / Herbicides	E ☒	N ☐	Landscape Area
Organic Compounds	E ☒	N ☐	Cars & Trucks
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	
Other:	E ☐	N ☐	

Section 3 Site and Watershed Description

Describe the project site conditions that will facilitate the selection of BMPs through an analysis of the physical conditions and limitations of the site and its receiving waters. Identify distinct drainage areas (DA) that collect flow from a portion of the site and describe how runoff from each DA (and sub-watershed Drainage Management Areas (DMAs)) is conveyed to the site outlet(s). Refer to Section 3.2 in the TGD for WQMP. The form below is provided as an example. Then complete Forms 3.2 and 3.3 for each DA on the project site. ***If the project has more than one drainage area for stormwater management, then complete additional versions of these forms for each DA / outlet. A map presenting the DMAs must be included as an appendix to the WQMP document.***

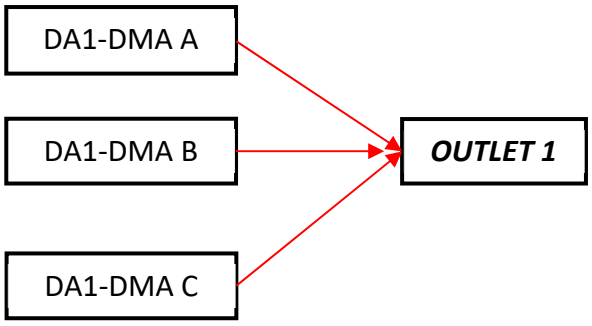
Form 3-1 Site Location and Hydrologic Features

Site coordinates *take GPS measurement at approximate center of site*	Latitude 34°26'11.5"N	Longitude 117°22'36.6"W	Thomas Bros Map page

1 San Bernardino County climatic region: ☒ Desert

2 Does the site have more than one drainage area (DA): Yes☐ No☒ *If no, proceed to Form 3-2. If yes, then use this form to show a conceptual schematic describing DMAs and hydrologic feature connecting DMAs to the site outlet(s). An example is provided below that can be modified for proposed project or a drawing clearly showing DMA and flow routing may be attached*

c



Conveyance	Briefly describe on-site drainage features to convey runoff that is not retained within a DMA
	Ex. Bioretention overflow to vegetated bioswale with 4' bottom width, 5:1 side slopes and bed slope of 0.01. Conveys runoff for 1000' through DMA 1 to existing catch basin on SE corner of property
	*Runoff sheet flows into the nearest catch basin which is then routed into a combination of an "**Underground CMP Infiltration System**" and "**Retention Basin-1**".*
	*Runoff sheet flows into the nearest catch basin which is then routed into a combination of an "**Retention Basin-2**" and the remaining flow is then directed into "**Retention Basin-4**".*
	*Runoff sheet flows into the nearest catch basin which is then routed into a combination of an "**Retention Basin-3**" and the remaining flow is then directed into "**Retention Basin-4**".*

Form 3-2 Existing Hydrologic Characteristics for Drainage Area 1				
For Drainage Area 1's sub-watershed DMA, provide the following characteristics	DMA A			
1 DMA drainage area (ft^2)	1,376,060			
2 Existing site impervious area (ft^2)	0			
3 Antecedent moisture condition *For desert areas, use http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_map.pdf*	AMC II			
4 Hydrologic soil group *Refer to County Hydrology Manual Addendum for Arid Regions – http://www.sbcounty.gov/dpw/floodcontrol/pdf/20100412_addendum.pdf*	B			
5 Longest flowpath length (ft)	2,695			
6 Longest flowpath slope (ft/ft)	0.014			
7 Current land cover type(s) *Select from Fig C-3 of Hydrology Manual*	Chaparral			
8 Pre-developed pervious area condition: *Based on the extent of wet season vegetated cover good >75%; Fair 50-75%; Poor <50%* ***Attach photos of site to support rating***	Poor			

Form 3-3 Watershed Description for Drainage Area

Receiving waters Refer to SWRCB site: http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml	Mojave River (Mojave Forks Reservoir outlet to Upper Narrows) Oro Grande Owner: SBCFCD
Applicable TMDLs *http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml*	Boron, Chloride, Dissolved oxygen saturation, Nitrate, Nitrite, Dissolved Oxygen, Total Kjeldahl Nitrogen, Total Dissolved Solids, Water Temperature, Sulfates, Specific Conductance, Phosphorus, Phosphate, pH,
303(d) listed impairments *http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml*	Fluoride
Environmentally Sensitive Areas (ESA) *Refer to Watershed Mapping Tool – http://sbcounty.permitrack.com/WAP*	Not Applicable
Hydromodification Assessment	☐ Yes *Complete Hydromodification Assessment. Include Forms 4.2-2 through Form 4.2-5 and Hydromodification BMP Form 4.3-9 in submittal* ☒ No

Section 4 Best Management Practices (BMP)

4.1 Source Control BMPs and Site Design BMP Measures

The information and data in this section are required for both Regulated Development and Site Design Only Projects. Source Control BMPs and Site Design BMP Measures are the basis of site-specific pollution management.

4.1.1 Source Control BMPs

Non-structural and structural source control BMP are required to be incorporated into all new development and significant redevelopment projects. Form 4.1-1 and 4.1-2 are used to describe specific source control BMPs used in the WQMP or to explain why a certain BMP is not applicable. Table 7-3 of the TGD for WQMP provides a list of applicable source control BMP for projects with specific types of potential pollutant sources or activities. The source control BMP in this table must be implemented for projects with these specific types of potential pollutant sources or activities.

The preparers of this WQMP have reviewed the source control BMP requirements for new development and significant redevelopment projects. The preparers have also reviewed the specific BMP required for project as specified in Forms 4.1-1 and 4.1-2. All applicable non-structural and structural source control BMP shall be implemented in the project.

The identified list of source control BMPs correspond to the CASQA Stormwater BMP Handbook for New Development and Redevelopment.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N1	Education of Property Owners, Tenants and Occupants on Stormwater BMPs	☒	☐	The current owner/developer and future owners and their POA shall be familiar with the contents of this WQMP and County & City ordinances and brochures and furnish copies of these documents to all future property owners.
N2	Activity Restrictions	☒	☐	Property owners and their tenants or occupants shall not be allowed to discharge chemicals, chemical residues, wastewater or other prohibited discharges listed in the City stormwater Ordinance, to the outside, paved areas of the site; or store chemicals or other pollutant sources in a non-spill contained or covered facilities as stipulated in the CC&Rs.
N3	Landscape Management BMPs	☒	☐	The POA and their landscape maintenance contractor shall inspect the irrigation system plant health and erosion problems after each landscape procedure and shall report all repairs and problems to the POA. All routine landscaping maintenance.
N4	BMP Maintenance	☒	☐	The POA shall inspect for standing water in the water retention/infiltration basins, 48 hours after storm events. BMP maintenance shall be performed per the schedule in Form 5-1, as needed to restore free drainage.
N5	Title 22 CCR Compliance (How development will comply)	☐	☒	The POA will file appropriate hazardous material disclosures, if any storage is conducted, and must comply with all Title 22 CCR, Chapter 29 regulations.
N6	Local Water Quality Ordinances	☐	☒	The POA shall ensure that all maintenance activities at the site comply with the City of Ontario's Stormwater Ordinance, through the implementation of BMPs.
N7	Spill Contingency Plan	☒	☐	Building operators shall prepare specific plans based on materials on site for the cleanup of spills. Plans shall mandate stock piling of cleanup materials, notification of agencies, disposal, documentation, ect.
N8	Underground Storage Tank Compliance	☐	☒	There are no underground storage tanks at this site.
N9	Hazardous Materials Disclosure Compliance	☐	☒	The current owner and the future POA shall prohibit the storage of hazardous materials.

Form 4.1-1 Non-Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, if not applicable, state reason
		Included	Not Applicable	
N10	Uniform Fire Code Implementation	☒	☐	The current owners or the future POA shall require all fire code requirements to be implemented at this project site.
N11	Litter/Debris Control Program	☒	☐	The property owners, POA and their contractor shall pick up litter and sweep and clean the existing trash enclosure weekly. The trash enclosure is designed to divert all flows around the dumpsters and shall be roofed. The HOA shall contract with a refuse company to have the dumpsters emptied on a weekly basis, at a minimum.
N12	Employee Training	☒	☐	The POA shall require all maintenance contractors to train their employees in stormwater BMP implementation.
N13	Housekeeping of Loading Docks	☒	☐	Dock areas shall be swept regularly with litter control and cleanup procedures eliminating the use of water.
N14	Catch Basin Inspection Program	☒	☐	The on-site catch basins shall be inspected monthly during the rainy season (October-May) and before and after each storm to ensure proper operation. The HOA shall contract with a qualified landscape contractor to inspect and clean out accumulation of trash, litter and sediment and check for evidence of illegal dumping of waste materials into on-site drains.
N15	Vacuum Sweeping of Private Streets and Parking Lots	☒	☐	The paved areas and common open areas of the project site shall be swept and cleaned weekly by the POA's contractor
N16	Other Non-structural Measures for Public Agency Projects	☐	☒	This development is not part of a Public Agency Project.
N17	Comply with all other applicable NPDES permits	☒	☐	The developer of this site shall comply with all BMP implementation requirements of the City of Ontario for Stormwater discharges during construction of this project and shall file for a permit coverage under the Statewide General Construction Stormwater Permit, prior to beginning construction/grading activities at this site. Following occupancy, owners, tenants, and POA shall comply with SB County MS4 Permit requirements, enforced by the City of Ontario.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S1	Provide storm drain system stencilling and signage (CASQA New Development BMP Handbook SD-13)	☒	☐	A painted message "No Dumping-Drains to River" shall be placed on each catch basin by developer. The message shall be inspected annually & repainted as necessary by the POA.
S2	Design and construct outdoor material storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-34)	☐	☒	This development does not include the storage of materials outdoors.
S3	Design and construct trash and waste storage areas to reduce pollution introduction (CASQA New Development BMP Handbook SD-32)	☒	☐	Stormwater flows are diverted away from the trash enclosure. All dumpsters shall have working lids which shall be kept closed, at all times. Trash enclosure shall comply with CASQA SD-32 and shall have doors and a solid roof.
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control (Statewide Model Landscape Ordinance; CASQA New Development BMP Handbook SD-12)	☒	☐	The irrigation system will include devices to prevent low head drainage, overspray and run off through the use of pressure regulating devices, check valves, rain shutoff valves, flow sensors, pressure drop sensors, proper spacing, low precipitation emission devices and ET or weather-based controllers. Landscape and irrigation shall be consistent with the State Model Water Efficient landscape Ordinance and the City of Ontario landscape Development Standards. Plants installed will be arranged according to similar hydrozones and meet the required water budget for the site. Shade trees shall be used to intercept rainwater and reduce heat gain on paving.
S5	Finish grade of landscaped areas at a minimum of 1-2 inches below top of curb, sidewalk, or pavement	☒	☐	All landscaped areas shall comply with depressed grading requirements by finish grading to a minimum of 1" below pavement grades or top-of-curb.
S6	Protect slopes and channels and provide energy dissipation (CASQA New Development BMP Handbook SD-10)	☐	☐	All slopes shall be hard lined, rip-rapped or vegetated to provide erosion protection and prevent sediment transport
S7	Covered dock areas (CASQA New Development BMP Handbook SD-31)	☐	☒	Unloading of truck trailers at docks will occur under cover of the building. It is not feasible to cover the entire loading area as it would be cost prohibitive. Project will incorporate dock high rollup doors and sweeping activities at the outside of the building.
S8	Covered maintenance bays with spill containment plans (CASQA New Development BMP Handbook SD-31)	☐	☒	Maintenance bays are not proposed as a part of this development, and no maintenance activities will be allowed on site.

Form 4.1-2 Structural Source Control BMPs

Identifier	Name	Check One		Describe BMP Implementation OR, If not applicable, state reason
		Included	Not Applicable	
S9	Vehicle wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Vehicle wash areas are not provided as part of this development.
S10	Covered outdoor processing areas (CASQA New Development BMP Handbook SD-36)	☐	☒	Outdoor processing is not associated with the proposed development.
S11	Equipment wash areas with spill containment plans (CASQA New Development BMP Handbook SD-33)	☐	☒	Outdoor equipment is not associated with the proposed development.
S12	Fueling areas (CASQA New Development BMP Handbook SD-30)	☐	☒	Fueling areas are not included as part of this development.
S13	Hillside landscaping (CASQA New Development BMP Handbook SD-10)	☒	☐	No hillsides will require re-vegetation as part of the proposed development.
S14	Wash water control for food preparation areas	☐	☒	The proposed development does not include food preparation areas.
S15	Community car wash racks (CASQA New Development BMP Handbook SD-33)	☐	☒	The proposed development does not include community car wash areas

4.1.2 Site Design BMPs

As part of the planning phase of a project, the site design practices associated with new LID requirements in the Phase II Small MS4 Permit must be considered. Site design BMP measures can result in smaller Design Capture Volume (DCV) to be managed by both LID and hydromodification control BMPs by reducing runoff generation.

As is stated in the Permit, it is necessary to evaluate site conditions such as soil type(s), existing vegetation and flow paths will influence the overall site design.

Describe site design and drainage plan including:

- A narrative of site design practices utilized or rationale for not using practices
- A narrative of how site plan incorporates preventive site design practices
- Include an attached Site Plan layout which shows how preventative site design practices are included in WQMP

Refer to Section 5.2 of the TGD for WQMP for more details.

Form 4.1-3 Site Design Practices Checklist

Site Design Practices *If yes, explain how preventative site design practice is addressed in project site plan. If no, other LID BMPs must be selected to meet targets*
Minimize impervious areas: Yes ☒ No ☐ Explanation: Impervious areas will be minimized to the maximum extent practicable. The proposed development requires large areas for loading docks and building foot prints.
Maximize natural infiltration capacity; Including improvement and maintenance of soil: Yes ☒ No ☐ Explanation: All pervious areas will be below adjacent impervious areas to maximize natural infiltration, and the project site utilizes subsurface infiltration basins.
Preserve existing drainage patterns and time of concentration: Yes ☐ No ☒ Explanation: Post-development has different travel distance, surface roughness and time concentration from the existing condition.
Disconnect impervious areas. Including rerouting of rooftop drainage pipes to drain stormwater to storage or infiltration BMPs instead of to storm drain : Yes ☒ No ☐ Explanation: Most areas are run through landscape areas prior to entering the storm drain system. Roof area will be conveyed through adjacent landscaping, where feasible.
Use of Porous Pavement.: Yes ☐ No ☒ Explanation: Any areas that are disturbed will be stabilized prior to project completion.
Protect existing vegetation and sensitive areas: Yes ☐ No ☒ Explanation: Native vegetation has been mostly removed by agricultural activities, and the existing undeveloped area will not be preserved.
Re-vegetate disturbed areas. Including planting and preservation of drought tolerant vegetation. : Yes ☒ No ☐ Explanation: Any areas that are disturbed will be stabilized prior to project completion.

Minimize unnecessary compaction in stormwater retention/infiltration basin/trench areas: Yes ☒ No ☐ Explanation: Landscaping areas will be staked off after rough grading has been completed to prevent excessive compaction, the areas in which the subsurface basins are to be constructed will minimize compaction.
Utilize naturalized/rock-lined drainage swales in place of underground piping or imperviously lined swales: Yes ☐ No ☒ Explanation: The project does not incorporate naturalized/ rock-lined drainage swales in place of underground piping.
Stake off areas that will be used for landscaping to minimize compaction during construction : Yes ☒ No ☐ Explanation: Landscaping areas will be staked off after rough grading has been completed to prevent excessive compaction.
Use of Rain Barrels and Cisterns, Including the use of on-site water collection systems.: Yes ☐ No ☒ Explanation: The project does not incorporate rain barrels and cisterns.
Stream Setbacks. Includes a specified distance from an adjacent steam: Yes ☐ No ☒ Explanation: There are no adjacent to the property.

It is noted that, in the Phase II Small MS4 Permit, site design elements for green roofs and vegetative swales are required. Due to the local climatology in the Mojave River Watershed, proactive measures are taken to maximize the amount of drought tolerant vegetation. It is not practical in this region to have green roofs or vegetative swales. As part of site design the project proponent should utilize locally recommended vegetation types for landscaping. Typical landscaping recommendations are found in following local references:

San Bernardino County Special Districts:

Guide to High Desert Landscaping -
http://www.specialdistricts.org/Modules/ShowDocument.aspx?documentid=795

Recommended High-Desert Plants -
http://www.specialdistricts.org/modules/showdocument.aspx?documentid=553

Mojave Water Agency:

Desert Ranch: http://www.mojavewater.org/files/desertranchgardenprototype.pdf

Summertree: http://www.mojavewater.org/files/Summertree-Native-Plant-Brochure.pdf

Thornless Garden: http://www.mojavewater.org/files/thornlessgardenprototype.pdf

Mediterranean Garden: http://www.mojavewater.org/files/mediterraneangardenprototype.pdf

Lush and Efficient Garden: http://www.mojavewater.org/files/lushandefficientgardenprototype.pdf

Alliance for Water Awareness and Conservation (AWAC) outdoor tips – http://hdawac.org/save-outdoors.html

4.2 Treatment BMPs

After implementation and design of both Source Control BMPs and Site Design BMP measures, any remaining runoff from impervious DMAs must be directed to one or more on-site, treatment BMPs (LID or biotreatment) designed to infiltrate, evaportranspire, and/or bioretain the amount of runoff specified in Permit Section E.12.e (ii)(c) Numeric Sizing Criteria for Storm Water Retention and Treatment.

4.2.1 Project Specific Hydrology Characterization

The purpose of this section of the Project WQMP is to establish targets for post-development hydrology based on performance criteria specified in Section E.12.e.ii.c and Section E.12.f of the Phase II Small MS4 Permit. These targets include runoff volume for water quality control (referred to as LID design capture volume), and runoff volume, time of concentration, and peak runoff for protection from hydromodification.

If the project has more than one outlet for stormwater runoff, then complete additional versions of these forms for each DA / outlet.

It is noted that in the Phase II Small MS4 Permit jurisdictions, the LID BMP Design Capture Volume criteria is based on the 2-year rain event. The hydromodification performance criterion is based on the 10-year rain event.

Methods applied in the following forms include:

- For LID BMP Design Capture Volume (DCV), San Bernardino County requires use of the P_6 method (Form 4.2-1) For pre- and post-development hydrologic calculation, San Bernardino County requires the use of the Rational Method (San Bernardino County Hydrology Manual Section D). Forms 4.2-2 through Form 4.2-5 calculate hydrologic variables including runoff volume, time of concentration, and peak runoff from the project site pre- and post-development using the Hydrology Manual Rational Method approach. For projects greater than 640 acres (1.0 mi^2), the Rational Method and these forms should not be used. For such projects, the Unit Hydrograph Method (San Bernardino County Hydrology Manual Section E) shall be applied for hydrologic calculations for hydromodification performance criteria.

Refer to Section 4 in the TGD for WQMP for detailed guidance and instructions.

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA1 DMA A)		
1 Project area DA1 DMA A (ft^2): 273,992	**2** Imperviousness after applying preventative site design practices (Imp%): 81	**3** Runoff Coefficient (Rc): 0.61 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.43 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.54 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 14,742 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA1 DMA B)		
1 Project area DA1 DMA B (ft^2): 831,125	**2** Imperviousness after applying preventative site design practices (Imp%): 90	**3** Runoff Coefficient (Rc): 0.73 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.43 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.54 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 52,842 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

Form 4.2-1 LID BMP Performance Criteria for Design Capture Volume (DA1 DMA C)		
1 Project area DA1 DMA C (ft^2): 270,943	**2** Imperviousness after applying preventative site design practices (Imp%): 48	**3** Runoff Coefficient (Rc): 0.33 *$R_c = 0.858(Imp\%)^{\wedge 3} - 0.78(Imp\%)^{\wedge 2} + 0.774(Imp\%) + 0.04$*
4 Determine 1-hour rainfall depth for a 2-year return period $P_{2yr\text{-}1hr}$ (in): 0.43 *http://hdsc.nws.noaa.gov/hdsc/pfds/sa/sca_pfds.html*		
5 Compute P_6, Mean 6-hr Precipitation (inches): 0.54 *P_6 = Item 4 * C_1, where C_1 is a function of site climatic region specified in Form 3-1 Item 1 (Desert = 1.2371)*		
6 Drawdown Rate *Use 48 hours as the default condition. Selection and use of the 24 hour drawdown time condition is subject to approval by the local jurisdiction. The necessary BMP footprint is a function of drawdown time. While shorter drawdown times reduce the performance criteria for LID BMP design capture volume, the depth of water that can be stored is also reduced.*		24-hrs ☐ 48-hrs ☒
7 Compute design capture volume, DCV (ft^3): 7,720 *DCV = 1/12 * [Item 1* Item 3 *Item 5 * C_2], where C_2 is a function of drawdown rate (24-hr = 1.582; 48-hr = 1.963)* *Compute separate DCV for each outlet from the project site per schematic drawn in Form 3-1 Item 2*		

4.3 BMP Selection and Sizing

Complete the following forms for each project site DA to document that the proposed treatment (LID/Bioretention) BMPs conform to the project DCV developed to meet performance criteria specified in the Phase II Small MS4 Permit (WQMP Template Section 4.2). For the LID DCV, the forms are ordered according to hierarchy of BMP selection as required by the Phase II Small MS4 Permit (see Section 5.3 in the TGD for WQMP). The forms compute the following for on-site LID BMP:

- Site Design Measures (Form 4.3-2)
- Retention and Infiltration BMPs (Form 4.3-3) or
- Biotreatment BMPs (Form 4.3-4).

> Please note that the selected BMPs may also be used as dual purpose for on-site, hydromodification mitigation and management.

At the end of each form, additional fields facilitate the determination of the extent of mitigation provided by the specific BMP category, allowing for use of the next category of BMP in the hierarchy, if necessary.

The first step in the analysis, using Section 5.3.2 of the TGD for WQMP, is to complete Forms 4.3-1 and 4.3-3) to determine if retention and infiltration BMPs are infeasible for the project. For each feasibility criterion in Form 4.3-1, if the answer is "Yes," provide all study findings that includes relevant calculations, maps, data sources, etc. used to make the determination of infeasibility.

Next, complete Form 4.3-2 to determine the feasibility of applicable Site Design BMPs, and, if their implementation is feasible, the extent of mitigation of the DCV.

If no site constraints exist that would limit the type of BMP to be implemented in a DA, evaluate the use of combinations of LID BMPs, including all applicable Site Design BMPs to maximize on-site retention of the DCV. If no combination of BMP can mitigate the entire DCV, implement the single BMP type, or combination of BMP types, that maximizes on-site retention of the DCV within the minimum effective area.

If the combination of site design, retention and/or infiltration BMPs is unable to mitigate the entire DCV, then the remainder of the volume-based performance criteria that cannot be achieved with site design, retention and/or infiltration BMPs must be managed through biotreatment BMPs. If biotreatment BMPs are used, then they must be sized to provide equivalent effectiveness based on Template Section 4.3.4.

4.3.1 Exceptions to Requirements for Bioretention Facilities

Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box-type biofilters or in-vault media filters) may be used for the following categories of Regulated Projects:

1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;

2) Facilities receiving runoff solely from existing (pre-project) impervious areas; and

3) Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

Form 4.3-1 Infiltration BMP Feasibility (DA 1)

Feasibility Criterion – Complete evaluation for each DA on the Project Site

[1] Would infiltration BMP pose significant risk for groundwater related concerns? Yes ☐ No ☒
Refer to Section 5.3.2.1 of the TGD for WQMP

If Yes, Provide basis: (attach)

[2] Would installation of infiltration BMP significantly increase the risk of geotechnical hazards? Yes ☐ No ☒
(Yes, if the answer to any of the following questions is yes, as established by a geotechnical expert):

- The location is less than 50 feet away from slopes steeper than 15 percent
- The location is less than ten feet from building foundations or an alternative setback.
- A study certified by a geotechnical professional or an available watershed study determines that stormwater infiltration would result in significantly increased risks of geotechnical hazards.

If Yes, Provide basis: (attach)

[3] Would infiltration of runoff on a Project site violate downstream water rights? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[4] Is proposed infiltration facility located on hydrologic soil group (HSG) D soils or does the site geotechnical investigation indicate presence of soil characteristics, which support categorization as D soils? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[5] Is the design infiltration rate, after accounting for safety factor of 2.0, below proposed facility less than 0.3 in/hr (accounting for soil amendments)? Yes ☐ No ☒

If Yes, Provide basis: (attach)

[6] Would on-site infiltration or reduction of runoff over pre-developed conditions be partially or fully inconsistent with watershed management strategies as defined in the WAP, or impair beneficial uses? Yes ☐ No ☒
See Section 3.5 of the TGD for WQMP and WAP

If Yes, Provide basis: (attach)

[7] Any answer from Item 1 through Item 3 is "Yes": Yes ☐ No ☒
If yes, infiltration of any volume is not feasible onsite. Proceed to Form 4.3-4, Selection and Evaluation of Biotreatment BMP.
If no, then proceed to Item 8 below.

[8] Any answer from Item 4 through Item 6 is "Yes": Yes ☐ No ☒
If yes, infiltration is permissible but is not required to be considered. Proceed to Form 4.3-2, Site Design BMP.
If no, then proceed to Item 9, below.

[9] All answers to Item 1 through Item 6 are "No":
Infiltration of the full DCV is potentially feasible, LID infiltration BMP must be designed to infiltrate the full DCV to the MEP.
Proceed to Form 4.3-2, Site Design BMPs.

4.3.2 Site Design BMP

Section E.12.e. of the Small Phase II MS4 Permit emphasizes the use of LID preventative measures; and the use of Site Design Measures reduces the portion of the DCV that must be addressed in downstream BMPs. Therefore, all applicable Site Design Measures shall be provided except where they are mutually exclusive with each other, or with other BMPs. Mutual exclusivity may result from overlapping BMP footprints such that either would be potentially feasible by itself, but both could not be implemented. Please note that while there are no numeric standards regarding the use of Site Design BMPs. If a project cannot feasibly meet BMP sizing requirements or cannot fully address hydromodification, feasibility of all applicable Site Design BMPs must be part of demonstrating that the BMP system has been designed to retain the maximum feasible portion of the DCV. Refer to Section 5.4 in the TGD for more detailed guidance.

Form 4.3-2 Site Design BMPs (DA 1)

1 Implementation of Impervious Area Dispersion BMP (i.e. routing runoff from impervious to pervious areas), excluding impervious areas planned for routing to on-lot infiltration BMP: Yes ☐ No ☒ *If yes, complete Items 2-5; If no, proceed to Item 6*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
2 Total impervious area draining to pervious area (ft^2)			
3 Ratio of pervious area receiving runoff to impervious area			
4 Retention volume achieved from impervious area dispersion (ft^3) *V = Item2 * Item 3 * (0.5/12), assuming retention of 0.5 inches of runoff*			
5 Sum of retention volume achieved from impervious area dispersion (ft^3):	$V_{retention}$ *=Sum of Item 4 for all BMPs*		
6 Implementation of Localized On-lot Infiltration BMPs (e.g. on-lot rain gardens): Yes ☐ No ☒ *If yes, complete Items 7-13 for aggregate of all on-lot infiltration BMP in each DA; If no, proceed to Item 14*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
7 Ponding surface area (ft^2)			
8 Ponding depth (ft) (min. 0.5 ft.)			
9 Surface area of amended soil/gravel (ft^2)			
10 Average depth of amended soil/gravel (ft) (min. 1 ft.)			
11 Average porosity of amended soil/gravel			
12 Retention volume achieved from on-lot infiltration (ft^3) $V_{retention}$ *= (Item 7 *Item 8) + (Item 9 * Item 10 * Item 11)*			
13 Runoff volume retention from on-lot infiltration (ft^3):	$V_{retention}$ *=Sum of Item 12 for all BMPs*		

Form 4.3-2 cont. Site Design BMPs (DA 1)

14 Implementation of Street Trees: Yes ☐ No ☒ *If yes, complete Items 14-18. If no, proceed to Item 19*	DA DMA BMP Type	DA DMA BMP Type	DA DMA BMP Type *(Use additional forms for more BMPs)*
15 Number of Street Trees			
16 Average canopy cover over impervious area (ft^2)			
17 Runoff volume retention from street trees (ft^3) *$V_{retention}$ = Item 15 * Item 16 * (0.05/12) assume runoff retention of 0.05 inches*			
18 Runoff volume retention from street tree BMPs (ft^3):	*$V_{retention}$ = Sum of Item 17 for all BMPs*		
19 Total Retention Volume from Site Design BMPs:	*Sum of Items 5, 13 and 18*		

4.3.3 Infiltration BMPs

Use Form 4.3-3 to compute on-site retention of runoff from proposed retention and infiltration BMPs. Volume retention estimates are sensitive to the percolation rate used, which determines the amount of runoff that can be infiltrated within the specified drawdown time. The infiltration safety factor reduces field measured percolation to account for potential inaccuracy associated with field measurements, declining BMP performance over time, and compaction during construction. Appendix C of the TGD for WQMP provides guidance on estimating an appropriate safety factor to use in Form 4.3-3.

If site constraints limit the use of BMPs to a single type and implementation of retention and infiltration BMPs mitigate no more than 40% of the DCV, then they are considered infeasible and the Project Proponent may evaluate the effectiveness of BMPs lower in the LID hierarchy of use (Section 5.5 of the TGD for WQMP)

If implementation of infiltrations BMPs is feasible as determined using Form 4.3-1, then LID infiltration BMPs shall be implemented to the MEP (section 4.1 of the TGD for WQMP).

4.3.3.1 Allowed Variations for Special Site Conditions

The bioretention system design parameters of this Section may be adjusted for the following special site conditions:

1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.

2) Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).

3) Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.

4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide adequate pretreatment to address pollutants of concern unless these high-risk areas are isolated from storm water runoff or bioretention areas with no chance of spill migration.

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Form 4.3-3 Infiltration LID BMP - including underground BMPs (DA 1)

1 Remaining LID DCV not met by site design BMP (ft^3): 75,304 *V_{unmet} = Form 4.2-1 Item 7 - Form 4.3-2 Item19*

BMP Type *Use columns to the right to compute runoff volume retention from proposed infiltration BMP (select BMP from Table 5-4 in TGD for WQMP) - Use additional forms for more BMPs*	DA 1 BMP Type Infiltration/Retention Basin		
2 Infiltration rate of underlying soils (in/hr) *See Section 5.4.2 and Appendix C of the TGD for WQMP for minimum requirements for assessment methods*	TBD		
3 Infiltration safety factor *See TGD Section 5.4.2 and Appendix D*	2		
4 Design percolation rate (in/hr) *P_{design} = Item 2 / Item 3*	5		
5 Ponded water drawdown time (hr) *Copy Item 6 in Form 4.2-1*	48		
6 Maximum ponding depth (ft) *BMP specific, see Table 5-4 of the TGD for WQMP for BMP design details*			
7 Ponding Depth (ft) *d_{BMP} = Minimum of (1/12*Item 4*Item 5) or Item 6*	1.5		
8 Infiltrating surface area, SA_{BMP} (ft^2) *the lesser of the area needed for infiltration of full DCV or minimum space requirements from Table 5.7 of the TGD for WQMP*	50,203		
9 Amended soil depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 in the TGD for WQMP for reference to BMP design details*	4		
10 Amended soil porosity	0.35		
11 Gravel depth, d_{media} (ft) *Only included in certain BMP types, see Table 5-4 of the TGD for WQMP for BMP design details*	0		
12 Gravel porosity	0		
13 Duration of storm as basin is filling (hrs) *Typical ~ 3hrs*	3		
14 Above Ground Retention Volume (ft^3) *$V_{retention}$ = Item 8 * [Item7 + (Item 9 * Item 10) + (Item 11 * Item 12) + (Item 13 * (Item 4 / 12))]*	295,000(Basin 1)		
15 Underground Retention Volume (ft^3) *Volume determined using manufacturer's specifications and calculations*	305,000		

16 Total Retention Volume from LID Infiltration BMPs: 600,000 *(Sum of Items 14 and 15 for all infiltration BMP included in plan)*

17 Fraction of DCV achieved with infiltration BMP: 797% *Retention% = Item 16 / Form 4.2-1 Item 7*

18 Is full LID DCV retained onsite with combination of hydrologic source control and LID retention/infiltration BMPs? Yes ☒ No ☐

If yes, demonstrate conformance using Form 4.3-10; If no, then reduce Item 3, Factor of Safety to 2.0 and increase Item 8, Infiltrating Surface Area, such that the portion of the site area used for retention and infiltration BMPs equals or exceeds the minimum effective area thresholds (Table 5-7 of the TGD for WQMP) for the applicable category of development and repeat all above calculations.

4.3.4 Biotreatment BMP

Biotreatment BMPs may be considered if the full LID DCV cannot be met by maximizing retention and infiltration. A key consideration when using biotreatment BMP is the effectiveness of the proposed BMP in addressing the pollutants of concern for the project (see Table 5-5 of the TGD for WQMP).

Use Form 4.3-4 to summarize the potential for volume based and/or flow based biotreatment options to biotreat the remaining unmet LID DCV. Biotreatment computations are included as follows:

- Use Form 4.3-5 to compute biotreatment in small volume based biotreatment BMP (e.g. bioretention w/underdrains);
- Use Form 4.3-6 to compute biotreatment in large volume based biotreatment BMP (e.g. constructed wetlands);
- Use Form 4.3-7 to compute sizing criteria for flow-based biotreatment BMP (e.g. bioswales)

Form 4.3-4 Selection and Evaluation of Biotreatment BMP (DA 1)

1 Remaining LID DCV not met by site design , or infiltration, BMP for potential biotreatment (ft^3): 0 *Form 4.2-1 Item 7 - Form 4.3-2 Item 19 – Form 4.3-3 Item 16*	List pollutants of concern *Copy from Form 2.3-1.* Pathogen, Phosphorous, Nitrogen, Sediment, Metals, Oil Grease, Trash/Debris, Pesticides/ Herbicides, Organic Compounds	
2 Biotreatment BMP Selected *(Select biotreatment BMP(s) necessary to ensure all pollutants of concern are addressed through Unit Operations and Processes, described in Table 5-5 of the TGD for WQMP)*	Volume-based biotreatment *Use Forms 4.3-5 and 4.3-6 to compute treated volume*	Flow-based biotreatment *Use Form 4.3-7 to compute treated flow*
	☐ Bioretention with underdrain ☐ Planter box with underdrain ☐ Constructed wetlands ☐ Wet extended detention ☐ Dry extended detention	☐ Vegetated swale ☐ Vegetated filter strip ☐ Proprietary biotreatment
3 Volume biotreated in volume based biotreatment BMP (ft^3): *Form 4.3-5 Item 15 + Form 4.3-6 Item 13*	**4** Compute remaining LID DCV with implementation of volume based biotreatment BMP (ft^3): *Item 1 – Item 3*	**5** Remaining fraction of LID DCV for sizing flow based biotreatment BMP: % *Item 4 / Item 1*
6 Flow-based biotreatment BMP capacity provided (cfs): 0 *Use Figure 5-2 of the TGD for WQMP to determine flow capacity required to provide biotreatment of remaining percentage of unmet LID DCV (Item 5), for the project's precipitation zone (Form 3-1 Item 1)*		
7 Metrics for MEP determination: • Provided a WQMP with the portion of site area used for suite of LID BMP equal to minimum thresholds in Table 5-7 of the TGD for WQMP for the proposed category of development: ☐ *If maximized on-site retention BMPs is feasible for partial capture, then LID BMP implementation must be optimized to retain and infiltrate the maximum portion of the DCV possible within the prescribed minimum effective area. The remaining portion of the DCV shall then be mitigated using biotreatment BMP.*		

4.3.5 Conformance Summary

Complete Form 4.3-8 to demonstrate how on-site LID DCV is met with proposed site design, infiltration, and/or biotreatment BMP. The bottom line of the form is used to describe the basis for infeasibility determination for on-site LID BMP to achieve full LID DCV, and provides methods for computing remaining volume to be addressed in an alternative compliance plan. If the project has more than one outlet, then complete additional versions of this form for each outlet.

Form 4.3-8 Conformance Summary and Alternative Compliance Volume Estimate (DA 1)

1 Total LID DCV for the Project DA-1 (ft^3): 75,304 *Copy Item 7 in Form 4.2-1*

2 On-site retention with site design BMP (ft^3): 0 *Copy Item18 in Form 4.3-2*

3 On-site retention with LID infiltration BMP (ft^3): 600,000 *Copy Item 16 in Form 4.3-3*

4 On-site biotreatment with volume based biotreatment BMP (ft^3): 0 *Copy Item 3 in Form 4.3-4*

5 Flow capacity provided by flow based biotreatment BMP (cfs): 0 *Copy Item 6 in Form 4.3-4*

6 LID BMP performance criteria are achieved if answer to any of the following is "Yes":

- Full retention of LID DCV with site design or infiltration BMP: Yes ☒ No ☐
  If yes, sum of Items 2, 3, and 4 is greater than Item 1
- Combination of on-site retention BMPs for a portion of the LID DCV and volume-based biotreatment BMP that address all pollutants of concern for the remaining LID DCV: Yes ☐ No ☒
  If yes, a) sum of Items 2, 3, 4, and 5 is greater than Item 1, and Items 2, 3 and 4 are maximized; or b) Item 6 is greater than Form 4.3--5 Item 6 and Items 2, 3 and 4 are maximized
- On-site retention and infiltration is determined to be infeasible; therefore biotreatment BMP provides biotreatment for all pollutants of concern for full LID DCV: Yes ☐ No ☒
  If yes, Form 4.3-1 Items 7 and 8 were both checked yes

7 If the LID DCV is not achieved by any of these means, then the project may be allowed to develop an alternative compliance plan. Check box that describes the scenario which caused the need for alternative compliance:

- Combination of Site Design, retention and infiltration, , and biotreatment BMPs provide less than full LID DCV capture: ☐
  Checked yes if Form 4.3-4 Item 7is checked yes, Form 4.3-4 Item 6 is zero, and sum of Items 2, 3, 4, and 5 is less than Item 1. If so, apply water quality credits and calculate volume for alternative compliance, V_{alt} *= (Item 1 – Item 2 – Item 3 – Item 4 – Item 5) * (100 - Form 2.4-1 Item 2)%*

- Facilities, or a combination of facilities, of a different design than in Section E.12.e.(ii)(f) may be permitted if all of the following Phase II Small MS4 General Permit 2013-0001-DWQ 55 February 5, 2013 measures of equivalent effectiveness are demonstrated:
  1) Equal or greater amount of runoff infiltrated or evapotranspired; ☐
  2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment; ☐
  3) Equal or greater protection against shock loadings and spills; ☐
  4) Equal or greater accessibility and ease of inspection and maintenance. ☐

4.3.6 Hydromodification Control BMP

Use Form 4.3-9 to compute the remaining runoff volume retention, after Site Design BMPs are implemented, needed to address hydromodification, and the increase in time of concentration and decrease in peak runoff necessary to meet targets for protection of waterbodies with a potential hydromodification. Describe the proposed hydromodification treatment control BMP. Section 5.6 of the TGD for WQMP provides additional details on selection and evaluation of hydromodification control BMP.

4.4 Alternative Compliance Plan (if applicable)

Describe an alternative compliance plan (if applicable) for projects not fully able to infiltrate, or biotreat the DCV via on-site LID practices. A project proponent must develop an alternative compliance plan to address the remainder of the LID DCV. Depending on project type some projects may qualify for water quality credits that can be applied to reduce the DCV that must be treated prior to development of an alternative compliance plan (see Form 2.4-1, Water Quality Credits). Form 4.3-9 Item 8 includes instructions on how to apply water quality credits when computing the DCV that must be met through alternative compliance.

Alternative Designs — Facilities, or a combination of facilities, of a different design than in Permit Section E.12.e.(ii)(f) may be permitted if all of the following measures of equivalent effectiveness are demonstrated:

1) Equal or greater amount of runoff infiltrated or evapotranspired;

2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;

3) Equal or greater protection against shock loadings and spills;

4) Equal or greater accessibility and ease of inspection and maintenance.

The Project Proponent will need to obtain written approval for an alternative design from the Lahontan Regional Water Board Executive Officer (see Section 6 of the TGD for WQMP).

Section 5 Inspection and Maintenance Responsibility for Post Construction BMP

All BMPs included as part of the project WQMP are required to be maintained through regular scheduled inspection and maintenance (refer to Section 8, Post Construction BMP Requirements, in the TGD for WQMP). Fully complete Form 5-1 summarizing all BMP included in the WQMP. Attach additional forms as needed. The WQMP shall also include a detailed Operation and Maintenance Plan for all BMP and a Maintenance Agreement. The Maintenance Agreement must also be attached to the WQMP.

Note that at time of Project construction completion, the Maintenance Agreement must be completed, signed, notarized and submitted to the County Stormwater Department

Form 5-1 BMP Inspection and Maintenance (use additional forms as necessary)

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
Underground Infiltration System	Property Owner	Regular inspections of system to observe sediment build up and infiltration capacity. Cleaning of accumulated trash, debris, and sediment as determined by inspections. Cleaning is recommended during dry weather. See manufacturer recommendations for additional maintenance activities.	Monthly and within 48 hours following a significant storm event to verify there is no standing water in the chambers.
Onsite storm drain catch basins and piping	Property Owner	Onsite catch basins shall be inspected quarterly for debris buildup and evidence of illegal dumping and shall be cleaned whenever debris/sediment accumulates. Removal can be accomplished by vac-truck or other equally effective method.	Quarterly
Hydrodynamic Separator	Property Owner	Visual inspection and debris removed quarterly per manufactures recommendations	Quarterly
Above ground infiltration/ detention Basins	Property Owner	Inspections and maintenance by owners contracted maintenance staff to ensure that water infiltrates into the subsurface completely in 48 hours or less. Visual inspection, landscape maintenance, debris removal and erosion damage repair.	Monthly and within 48 hours following a significant storm event to verify there is no standing water in the chambers.
Landscape Maintenance	Property Owner	Maintain landscape area vegetation, slope protection and grades, adjacent to hardscape and prevent discharges of landscape maintenance waste into storm drains.	Weekly
Litter Control	Property Owner	Maintain roofed waste collection areas and vacuum-sweep drive aisles and parking areas to remove potential stormwater contamination before anticipated storm events.	Weekly/Monthly

Anti-Dumping Stenciling & Signage	Property Owner	Visual inspection and replacement of damaged or illegible stenciling and signage over on-site catch basins	Annually
Irrigation System	Property Owner	Check and repair the irrigation system. Verify there are no leaks or runoff from landscaped areas. Adjust irrigation heads and system run times as necessary to percent overwater of vegetation, overspray or run-off from landscape areas and to ensure the health and aesthetic quality of the landscape.	Weekly
Loading Docks	Property Owner	Sweep and clear debris from dock areas to remove potential stormwater contaminates prior to anticipated storms.	Weekly
Catch Basin Filter Inserts	Property Owner	Visual inspect filter for debris buildup. Removal can be accomplished by vac-truck or other equally effective method. See manufacturer recommendations for additional maintenance activities.	Quarterly and within 48 hours following a significant storm event to verify there is no standing water in the chambers

Section 6 WQMP Attachments

6.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural Source Control BMP locations
- Site Design Hydrologic Source Control BMP locations
- LID BMP details
- Drainage delineations and flow information
- Drainage connections

6.2 Electronic Data Submittal

Minimum requirements include submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open. If the local jurisdiction requires specialized electronic document formats (as described in their Local Implementation Plan), this section will describe the contents (e.g., layering, nomenclature, geo-referencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

6.3 Post Construction

Attach all O&M Plans and Maintenance Agreements for BMP to the WQMP.

6.4 Other Supporting Documentation

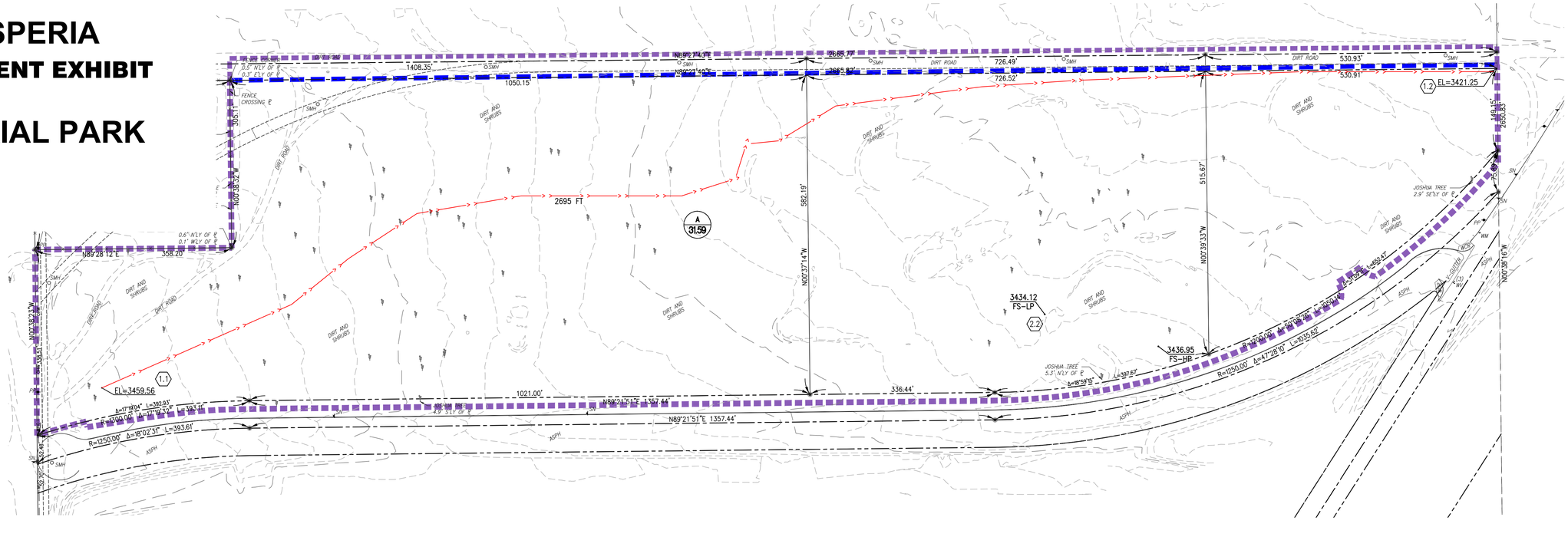
- BMP Educational Materials
- Activity Restriction – C,C&R's & Lease Agreements

CITY OF HESPERIA

PRE DEVELOPMENT EXHIBIT

FOR

SPEC INDUSTRIAL PARK



HYDROLOGY INFORMATION

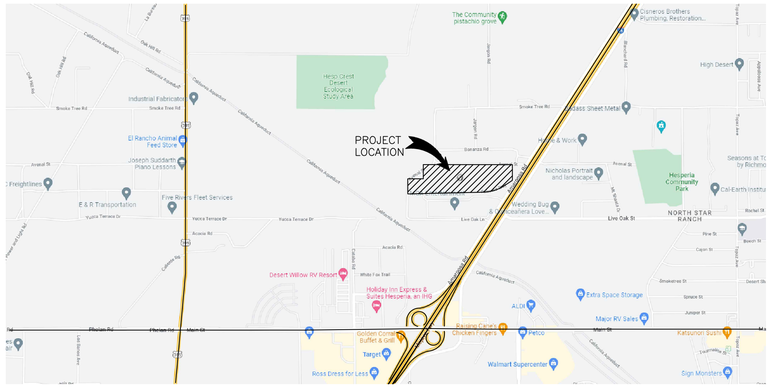
SITE AREA:	31± ACRES	
SOIL GROUP:	B	(PER USDA WEB SOIL SURVEY)
IMPERVIOUS:	80%	(PER CALCULATIONS)
ISOHYETALS:	0.433" 1.25"	(2-YEAR 1 HOUR) (100-YEAR 1 HOUR)
CN NUMBER:	78	(SOIL GROUP B)
FREQUENCY:	100 YEAR 2/10 YEAR	(FOR STORM DRAIN DESIGN) (FOR WATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

LEGEND:

- DRAINAGE AREA/SITE BOUNDARY
- DRAINAGE SUB-AREA BOUNDARY
- STORM WATER FLOW PATH
- PROPOSED STORM DRAIN PIPE
- PROPOSED FLOW DIRECTION ARROW
- DRAINAGE AREA DESIGNATION (X / XXX) AREA(AC)
- NODE (US/DS) (X.X)
- STREAM # (3)
- PROPOSED UNDERGROUND INFILTRATION/DETENTION
- PROPOSED BUILDING
- PROPOSED LANDSCAPING

DRAINAGE NOTES:

1. PROPOSED STORM DRAIN INLET
2. PROPOSED STORM DRAIN
3. PROPOSED INFILTRATION/DETENTION BASIN
4. PROPOSED UNDERGROUND INFILTRATION CMP



VICINITY MAP

N.T.S

PREPARED BY:

WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS

4150 CONCOURS, ONTARIO, CA 91764

PHONE: (909) 989-9789 FAX: (909) 989-9660

JOB NO: 2019-185

HCCII INDUSTRIAL PARK
WQMP PRE EXHIBIT

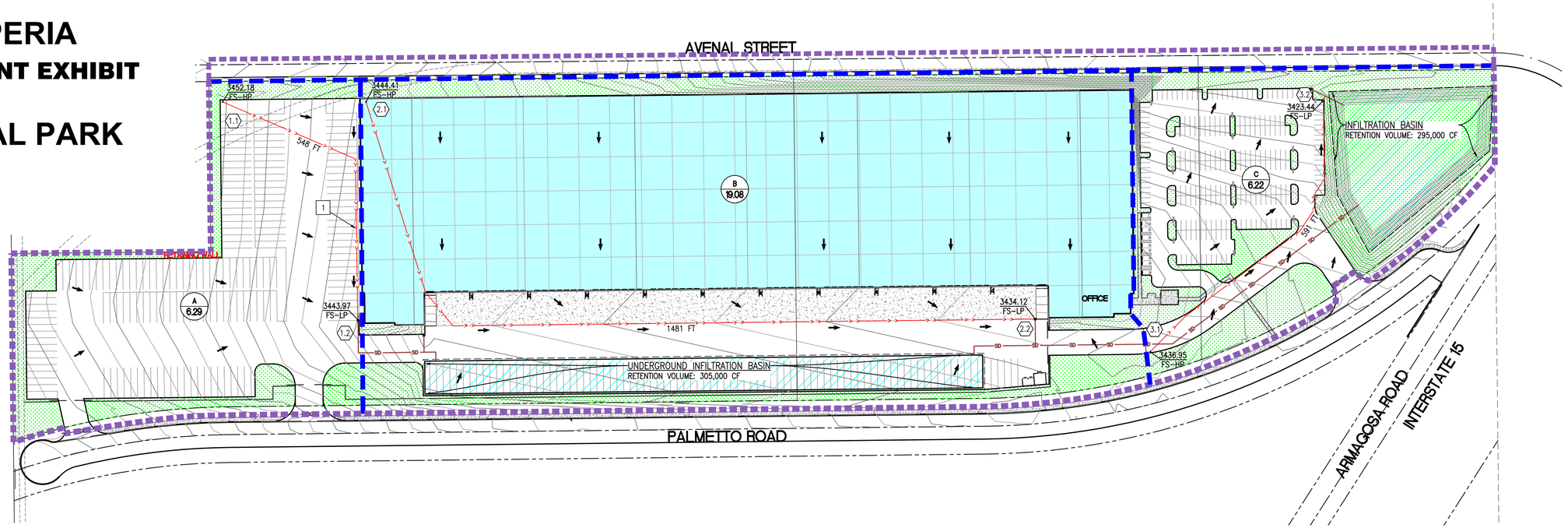
CITY OF HESPERIA

DATE: DEC 2021

SHEET 1 OF 1

Drawing Name: P:\Year_2021\2021-196 Hesperia Industrial - RDA - Chris Sovage\06 Engineering\Reports\Hydrology\X_Exhibits\2021-196_Hydro_Exhibit_Pre.dwg
Last Opened: Jul 10, 2022 - 7:48pm by: lucas.glauser

CITY OF HESPERIA
POST DEVELOPMENT EXHIBIT
FOR
SPEC INDUSTRIAL PARK



HYDROLOGY INFORMATION

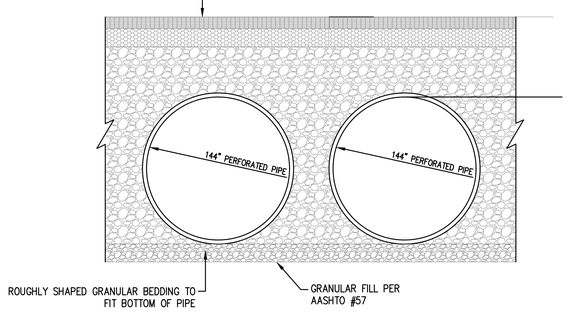
SITE AREA:	31± ACRES	
SOIL GROUP:	B	(PER USDA WEB SOIL SURVEY)
IMPERVIOUS:	80%	(PER CALCULATIONS)
ISOHYETALS:	0.433" 1.25"	(2-YEAR 1 HOUR) (100-YEAR 1 HOUR)
CN NUMBER:	78	(SOIL GROUP B)
FREQUENCY:	100 YEAR 2/10 YEAR	(FOR STORM DRAIN DESIGN) (FOR WATER QUALITY)
METHOD:	SAN BERNARDINO COUNTY HYDROLOGY MANUAL	

LEGEND:

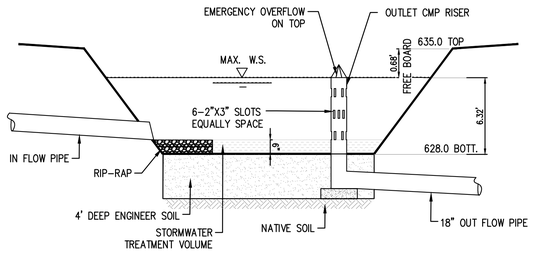
- DRAINAGE AREA/SITE BOUNDARY
- DRAINAGE SUB-AREA BOUNDARY
- STORM WATER FLOW PATH
- PROPOSED STORM DRAIN PIPE
- PROPOSED FLOW DIRECTION ARROW
- DRAINAGE AREA DESIGNATION (X / XXX = AREA(AC))
- NODE (US/DS) (X.X)
- STREAM # (3)
- PROPOSED UNDERGROUND INFILTRATION/DETENTION
- PROPOSED BUILDING
- PROPOSED LANDSCAPING

DRAINAGE NOTES:

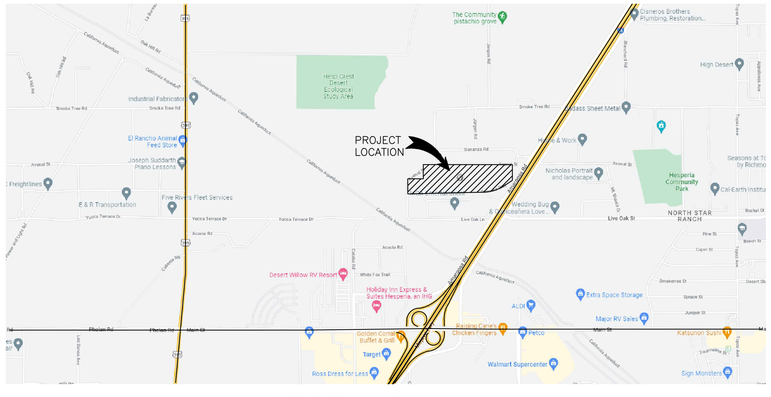
1. PROPOSED STORM DRAIN INLET
2. PROPOSED STORM DRAIN
3. PROPOSED INFILTRATION/DETENTION BASIN
4. PROPOSED UNDERGROUND INFILTRATION CMP



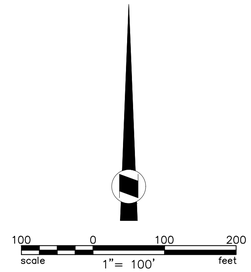
TYPICAL CMP UNDERGROUND INFILTRATION DETAIL
N.T.S



INFILTRATION/DETENTION BASIN-3 DETAIL
N.T.S



VICINITY MAP
N.T.S



PREPARED BY:
WestLAND Group, Inc. Land Surveyors • Civil Engineers • GIS
4150 CONCOURS, ONTARIO, CA 91764
PHONE: (909) 989-9789 FAX: (909) 989-9660
JOB NO: 2019-185

HCCII INDUSTRIAL PARK HYDROLOGY EXHIBIT

CITY OF HESPERIA

DATE: DEC 2021
SHEET 1 OF 1

Drawing Name: P:\Year_2021\2021-196 Hesperia Industrial - RDA - Chris Sovage\06 Engineering\Reports\Hydrology\3_Exhibits\2021-196_Hydro_Exhibit_Post.dwg
Last Opened: Jul 06, 2022 - 9:28pm by: lucas.glauser

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
25-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 25.0
Computed rainfall intensity:
Storm year = 25.00 1 hour rainfall = 0.942 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 2

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.139(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      3.479(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.864
      Subarea runoff =     18.908(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.139(In/Hr)
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ____________________________________________________________________
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    18.908(CFS)
      Nearest computed pipe diameter  =     24.00(In.)
      Calculated individual pipe flow  =    18.908(CFS)
      Normal flow depth in pipe =   19.31(In.)
      Flow top width inside pipe =   19.03(In.)
      Critical Depth =   18.77(In.)
      Pipe flow velocity =      6.97(Ft/s)
      Travel time through pipe =    3.31 min.
      Time of concentration (TC) =    12.59 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.073(In/Hr)
      Time of concentration =    12.59 min.
      Rainfall intensity =      2.810(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.871
      Subarea runoff =     43.201(CFS) for   19.080(Ac.)
      Total runoff =     62.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.090(In/Hr)
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    62.109(CFS)
      Nearest computed pipe diameter  =     33.00(In.)
      Calculated individual pipe flow  =    62.109(CFS)
      Normal flow depth in pipe =   25.27(In.)
      Flow top width inside pipe =   27.96(In.)
      Critical Depth =   30.18(In.)
      Pipe flow velocity =     12.74(Ft/s)
      Travel time through pipe =    0.88 min.
      Time of concentration (TC) =    13.47 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.382(In/Hr)
      Time of concentration =    13.47 min.
      Rainfall intensity =      2.680(In/Hr) for a    25.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.851
      Subarea runoff =      9.891(CFS) for    6.220(Ac.)
      Total runoff =     72.000(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.147(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

San Bernardino County Rational Hydrology Program

(Hydrology Manual Date - August 1986)

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989-2005
Version 7.1

Rational Hydrology Study Date: 07/15/22

2021-196 Hesperia Spec Industrial
Rational Method
100-year

Program License Serial Number 6277

********* Hydrology Study Control Information **********

Rational hydrology study storm event year is 100.0
Computed rainfall intensity:
Storm year = 100.00 1 hour rainfall = 1.250 (In.)
Slope used for rainfall intensity curve b = 0.7000
Soil antecedent moisture condition (AMC) = 3

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.100 to Point/Station
1.200
      **** INITIAL AREA EVALUATION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1900     Max loss rate(Fm)=
0.084(In/Hr)
      Initial subarea data:
      Initial area flow distance =   548.000(Ft.)
      Top (of initial area) elevation =    52.200(Ft.)
      Bottom (of initial area) elevation =    44.000(Ft.)
      Difference in elevation =     8.200(Ft.)
      Slope =    0.01496  s(%)=       1.50
      TC = k(0.321)*[(length^3)/(elevation change)]^0.2
      Initial area time of concentration =    9.279 min.
      Rainfall intensity =      4.617(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area (Q=KCIA) is C = 0.884
      Subarea runoff =     25.664(CFS)
      Total initial stream area =        6.290(Ac.)
      Pervious area fraction = 0.190
      Initial area Fm value =    0.084(In/Hr)
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        1.200 to Point/Station
2.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    44.000(Ft.)
      Downstream point/station elevation =    34.000(Ft.)
      Pipe length  =  1386.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    25.664(CFS)
      Nearest computed pipe diameter  =     27.00(In.)
      Calculated individual pipe flow  =    25.664(CFS)
      Normal flow depth in pipe =   21.56(In.)
      Flow top width inside pipe =   21.66(In.)
      Critical Depth =   21.24(In.)
      Pipe flow velocity =      7.54(Ft/s)
      Travel time through pipe =    3.06 min.
      Time of concentration (TC) =    12.34 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.100 to Point/Station
2.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.1000     Max loss rate(Fm)=
0.044(In/Hr)
      Time of concentration =    12.34 min.
      Rainfall intensity =      3.781(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.887
      Subarea runoff =     59.445(CFS) for   19.080(Ac.)
      Total runoff =     85.109(CFS)
      Effective area this stream =       25.37(Ac.)
      Total Study Area (Main Stream No. 1) =       25.37(Ac.)
      Area averaged Fm value =    0.054(In/Hr)
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        2.200 to Point/Station
3.200
      **** PIPEFLOW TRAVEL TIME (Program estimated size) ****
      ------------------------------------------------------------------------
____
      Upstream point/station elevation =    34.100(Ft.)
      Downstream point/station elevation =    23.400(Ft.)
      Pipe length  =   675.00(Ft.)   Manning's N = 0.013
      No. of pipes = 1  Required pipe flow  =    85.109(CFS)
      Nearest computed pipe diameter  =     39.00(In.)
      Calculated individual pipe flow  =    85.109(CFS)
      Normal flow depth in pipe =   26.86(In.)
      Flow top width inside pipe =   36.12(In.)
      Critical Depth =   34.49(In.)
      Pipe flow velocity =     13.98(Ft/s)
      Travel time through pipe =    0.80 min.
      Time of concentration (TC) =    13.15 min.
```

```
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++++
      Process from Point/Station        3.100 to Point/Station
3.200
      **** SUBAREA FLOW ADDITION ****
      ____________________________________________________________________
____
      Soil classification AP and SCS  values input by user
      USER INPUT of soil data for subarea
      SCS curve number for soil(AMC 2)  = 56.00
      Adjusted SCS curve number for AMC 3 = 75.80
      Pervious ratio(Ap) = 0.5200     Max loss rate(Fm)=
0.229(In/Hr)
      Time of concentration =    13.15 min.
      Rainfall intensity =      3.618(In/Hr) for a   100.0 year storm
      Effective runoff coefficient used for area,(total area with
modified
      rational method)(Q=KCIA) is C = 0.878
      Subarea runoff =     15.238(CFS) for    6.220(Ac.)
      Total runoff =    100.347(CFS)
      Effective area this stream =       31.59(Ac.)
      Total Study Area (Main Stream No. 1) =       31.59(Ac.)
      Area averaged Fm value =    0.088(In/Hr)
      End of computations, Total Study Area =           31.59 (Ac.)
      The following figures may
      be used for a unit hydrograph study of the same area.
      Note: These figures do not consider reduced effective area
      effects caused by confluences in the rational equation.

      Area averaged pervious area fraction(Ap) = 0.201
      Area averaged SCS curve number =  56.0
```

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2004, Version 7.0

Study date 07/15/22

++

San Bernardino County Synthetic Unit Hydrology Method
Manual date - August 1986

Program License Serial Number 6277

2021-196 Hesperia Spec Industrial
Unit Hydrograph
100-year

Storm Event Year = 100

Antecedent Moisture Condition = 3

English (in-lb) Input Units Used

English Rainfall Data (Inches) Input Values Used

English Units used in output format

Area averaged rainfall intensity isohyetal data:

Sub-Area (Ac.)	Duration (hours)	Isohyetal (In)
Rainfall data for year 10		
0.01	1	0.75
Rainfall data for year 2		
0.01	6	1.01
Rainfall data for year 2		
0.01	24	1.89

```
--
      Rainfall data for year 100
                0.01            1           1.25
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01            6           2.81
      ------------------------------------------------------------------
--
      Rainfall data for year 100
                0.01           24           5.90
      ------------------------------------------------------------------
--
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++

      ******** Area-averaged max loss rate, Fm ********


      SCS curve  SCS curve     Area     Area     Fp(Fig C6)    Ap
Fm
      No.(AMCII) NO.(AMC 3)    (Ac.)    Fraction     (In/Hr)  (dec.)
(In/Hr)
       56.0      75.8         31.59      1.000     0.440    0.200
0.088

      Area-averaged adjusted loss rate Fm (In/Hr) =  0.088

      ********* Area-Averaged low loss rate fraction, Yb **********

      Area       Area          SCS CN    SCS CN      S     Pervious
       (Ac.)      Fract         (AMC2)    (AMC3)           Yield Fr
           6.32   0.200         56.0      75.8       3.19     0.555
          25.27   0.800         98.0      98.0       0.20     0.960

      Area-averaged catchment yield fraction, Y =  0.879
      Area-averaged low loss fraction, Yb =  0.121
      User entry of time of concentration  =   0.227 (hours)
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
      Watershed area =      31.59(Ac.)
      Catchment Lag time =   0.182 hours
      Unit interval =   5.000 minutes
      Unit interval percentage of lag time = 45.8884
      Hydrograph baseflow =     0.00(CFS)
      Average maximum watershed loss rate(Fm) =  0.088(In/Hr)
      Average low loss rate fraction (Yb) = 0.121 (decimal)
      MOUNTAIN S-Graph Selected
      Computed peak 5-minute rainfall =  0.593(In)
      Computed peak 30-minute rainfall =  1.015(In)
      Specified peak 1-hour rainfall =  1.250(In)
      Computed peak 3-hour rainfall =  2.054(In)
      Specified peak 6-hour rainfall =  2.810(In)
      Specified peak 24-hour rainfall =  5.900(In)
```

```
      Rainfall depth area reduction factors:
      Using a total area of      31.59(Ac.) (Ref: fig. E-4)

      5-minute factor = 0.999     Adjusted rainfall =  0.592(In)
      30-minute factor = 0.999    Adjusted rainfall =  1.014(In)
      1-hour factor = 0.999       Adjusted rainfall =  1.248(In)
      3-hour factor = 1.000       Adjusted rainfall =  2.054(In)
      6-hour factor = 1.000       Adjusted rainfall =  2.810(In)
      24-hour factor = 1.000      Adjusted rainfall =  5.900(In)
      ------------------------------------------------------------------
---

                     U n i t  H y d r o g r a p h
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
+++
      Interval          'S' Graph          Unit Hydrograph
      Number            Mean values             ((CFS))
      ------------------------------------------------------------------
---
                (K =       382.04 (CFS))

        1                6.828                  26.086
        2               34.241                 104.729
        3               53.812                  74.769
        4               63.412                  36.675
        5               69.929                  24.899
        6               74.936                  19.129
        7               78.803                  14.773
        8               81.823                  11.537
        9               84.264                   9.327
       10               86.308                   7.807
       11               88.171                   7.119
       12               89.787                   6.173
       13               91.208                   5.430
       14               92.506                   4.960
       15               93.668                   4.438
       16               94.719                   4.017
       17               95.623                   3.454
       18               96.455                   3.176
       19               97.281                   3.156
       20               98.107                   3.156
       21               98.933                   3.156
       22              100.000                   1.578
      ------------------------------------------------------------------
---
      ------------------------------------------------------------------
--
      ------------------------------------------------------------------
--
      Total soil rain loss =      0.64(In)
      Total effective rainfall =      5.26(In)
      Peak flow rate in flood hydrograph =     81.24(CFS)
      ------------------------------------------------------------------
---
      ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
++
```

24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	22.5	45.0	67.5	90.0
0+ 5	0.0017	0.25	Q				
0+10	0.0104	1.26	Q				
0+15	0.0241	1.98	Q				
0+20	0.0402	2.34	VQ				
0+25	0.0581	2.59	VQ				
0+30	0.0772	2.78	VQ				
0+35	0.0974	2.93	VQ				
0+40	0.1184	3.05	VQ				
0+45	0.1400	3.14	VQ				
0+50	0.1622	3.23	VQ				
0+55	0.1850	3.30	VQ				
1+ 0	0.2082	3.37	VQ				
1+ 5	0.2319	3.43	VQ				
1+10	0.2559	3.49	VQ				
1+15	0.2803	3.54	VQ				
1+20	0.3050	3.59	VQ				
1+25	0.3300	3.63	VQ				
1+30	0.3553	3.67	|Q				
1+35	0.3809	3.71	|Q				
1+40	0.4067	3.75	|Q				
1+45	0.4328	3.79	|Q				
1+50	0.4591	3.82	|Q				

1+55	0.4855	3.83	|Q	|	|	|
2+ 0	0.5119	3.84	|Q	|	|	|
2+ 5	0.5384	3.85	|Q	|	|	|
2+10	0.5650	3.86	|Q	|	|	|
2+15	0.5917	3.87	|Q	|	|	|
2+20	0.6184	3.88	|Q	|	|	|
2+25	0.6452	3.89	|Q	|	|	|
2+30	0.6721	3.90	|Q	|	|	|
2+35	0.6990	3.91	|QV	|	|	|
2+40	0.7260	3.92	|QV	|	|	|
2+45	0.7531	3.93	|QV	|	|	|
2+50	0.7803	3.95	|QV	|	|	|
2+55	0.8076	3.96	|QV	|	|	|
3+ 0	0.8349	3.97	|QV	|	|	|
3+ 5	0.8623	3.98	|QV	|	|	|
3+10	0.8898	3.99	|QV	|	|	|
3+15	0.9174	4.00	|QV	|	|	|
3+20	0.9450	4.02	|QV	|	|	|
3+25	0.9728	4.03	|QV	|	|	|
3+30	1.0006	4.04	|QV	|	|	|
3+35	1.0285	4.05	|QV	|	|	|
3+40	1.0565	4.06	|Q V	|	|	|
3+45	1.0845	4.08	|Q V	|	|	|
3+50	1.1127	4.09	|Q V	|	|	|
3+55	1.1410	4.10	|Q V	|	|	|
4+ 0	1.1693	4.11	|Q V	|	|	|
4+ 5	1.1977	4.13	|Q V	|	|	|
4+10	1.2262	4.14	|Q V	|	|	|

4+15	1.2548	4.15	|Q V	|	|	|
4+20	1.2835	4.17	|Q V	|	|	|
4+25	1.3123	4.18	|Q V	|	|	|
4+30	1.3412	4.19	|Q V	|	|	|
4+35	1.3702	4.21	|Q V	|	|	|
4+40	1.3993	4.22	|Q V	|	|	|
4+45	1.4284	4.24	|Q V	|	|	|
4+50	1.4577	4.25	|Q V	|	|	|
4+55	1.4871	4.26	|Q V	|	|	|
5+ 0	1.5165	4.28	|Q V	|	|	|
5+ 5	1.5461	4.29	|Q V	|	|	|
5+10	1.5758	4.31	|Q V	|	|	|
5+15	1.6055	4.32	|Q V	|	|	|
5+20	1.6354	4.34	|Q V	|	|	|
5+25	1.6654	4.35	|Q V	|	|	|
5+30	1.6955	4.37	|Q V	|	|	|
5+35	1.7257	4.38	|Q V	|	|	|
5+40	1.7560	4.40	|Q V	|	|	|
5+45	1.7864	4.42	|Q V	|	|	|
5+50	1.8169	4.43	|Q V	|	|	|
5+55	1.8475	4.45	|Q V	|	|	|
6+ 0	1.8783	4.47	|Q V	|	|	|
6+ 5	1.9092	4.48	|Q V	|	|	|
6+10	1.9401	4.50	|Q V	|	|	|
6+15	1.9712	4.52	| Q V	|	|	|
6+20	2.0025	4.53	| Q V	|	|	|
6+25	2.0338	4.55	| Q V	|	|	|
6+30	2.0653	4.57	| Q V	|	|	|

6+35	2.0969	4.59	Q	V			
6+40	2.1286	4.60	Q	V			
6+45	2.1604	4.62	Q	V			
6+50	2.1924	4.64	Q	V			
6+55	2.2245	4.66	Q	V			
7+ 0	2.2567	4.68	Q	V			
7+ 5	2.2891	4.70	Q	V			
7+10	2.3216	4.72	Q	V			
7+15	2.3542	4.74	Q	V			
7+20	2.3870	4.76	Q	V			
7+25	2.4199	4.78	Q	V			
7+30	2.4530	4.80	Q	V			
7+35	2.4862	4.82	Q	V			
7+40	2.5195	4.84	Q	V			
7+45	2.5530	4.86	Q	V			
7+50	2.5867	4.89	Q	V			
7+55	2.6205	4.91	Q	V			
8+ 0	2.6544	4.93	Q	V			
8+ 5	2.6886	4.95	Q	V			
8+10	2.7228	4.98	Q	V			
8+15	2.7573	5.00	Q	V			
8+20	2.7919	5.03	Q	V			
8+25	2.8267	5.05	Q	V			
8+30	2.8616	5.07	Q	V			
8+35	2.8967	5.10	Q	V			
8+40	2.9320	5.12	Q	V			
8+45	2.9675	5.15	Q	V			
8+50	3.0032	5.18	Q	V			

8+55	3.0390	5.20	Q	V			
9+ 0	3.0750	5.23	Q	V			
9+ 5	3.1112	5.26	Q	V			
9+10	3.1476	5.29	Q	V			
9+15	3.1842	5.31	Q	V			
9+20	3.2211	5.34	Q	V			
9+25	3.2581	5.37	Q	V			
9+30	3.2953	5.40	Q	V			
9+35	3.3327	5.43	Q	V			
9+40	3.3704	5.47	Q	V			
9+45	3.4082	5.50	Q	V			
9+50	3.4463	5.53	Q	V			
9+55	3.4846	5.56	Q	V			
10+ 0	3.5232	5.60	Q	V			
10+ 5	3.5619	5.63	Q	V			
10+10	3.6010	5.67	Q	V			
10+15	3.6402	5.70	Q	V			
10+20	3.6797	5.74	Q	V			
10+25	3.7195	5.77	Q	V			
10+30	3.7595	5.81	Q	V			
10+35	3.7998	5.85	Q	V			
10+40	3.8404	5.89	Q	V			
10+45	3.8813	5.93	Q	V			
10+50	3.9224	5.97	Q	V			
10+55	3.9638	6.01	Q	V			
11+ 0	4.0055	6.06	Q	V			
11+ 5	4.0476	6.10	Q	V			
11+10	4.0899	6.15	Q	V			

11+15	4.1326	6.19	Q	V		
11+20	4.1755	6.24	Q	V		
11+25	4.2188	6.29	Q	V		
11+30	4.2625	6.34	Q	V		
11+35	4.3065	6.39	Q	V		
11+40	4.3509	6.44	Q	V		
11+45	4.3956	6.49	Q	V		
11+50	4.4407	6.55	Q	V		
11+55	4.4862	6.61	Q	V		
12+ 0	4.5321	6.67	Q	V		
12+ 5	4.5779	6.65	Q	V		
12+10	4.6221	6.42	Q	V		
12+15	4.6653	6.27	Q	V		
12+20	4.7082	6.23	Q	V		
12+25	4.7510	6.22	Q	V		
12+30	4.7940	6.24	Q	V		
12+35	4.8372	6.27	Q	V		
12+40	4.8806	6.31	Q	V		
12+45	4.9244	6.36	Q	V		
12+50	4.9686	6.42	Q	V		
12+55	5.0133	6.48	Q	V		
13+ 0	5.0584	6.55	Q	V		
13+ 5	5.1040	6.62	Q	V		
13+10	5.1501	6.70	Q	V		
13+15	5.1969	6.78	Q	V		
13+20	5.2442	6.88	Q	V		
13+25	5.2922	6.97	Q	V		
13+30	5.3409	7.07	Q	V		

13+35	5.3903	7.18	Q	V		
13+40	5.4406	7.29	Q	V		
13+45	5.4916	7.41	Q	V		
13+50	5.5435	7.54	Q	V		
13+55	5.5963	7.67	Q	V		
14+ 0	5.6502	7.83	Q	V		
14+ 5	5.7052	7.98	Q	V		
14+10	5.7613	8.16	Q	V		
14+15	5.8187	8.33	Q	V		
14+20	5.8774	8.53	Q	V		
14+25	5.9375	8.72	Q	V		
14+30	5.9991	8.94	Q	V		
14+35	6.0623	9.17	Q	V		
14+40	6.1272	9.43	Q	V		
14+45	6.1939	9.69	Q	V		
14+50	6.2627	9.99	Q	V		
14+55	6.3336	10.30	Q	V		
15+ 0	6.4071	10.66	Q	V		
15+ 5	6.4831	11.04	Q	V		
15+10	6.5623	11.49	Q	V		
15+15	6.6447	11.97	Q	V		
15+20	6.7311	12.54	Q	V		
15+25	6.8192	12.79	Q	V		
15+30	6.9024	12.08	Q	V		
15+35	6.9840	11.84	Q	V		
15+40	7.0691	12.36	Q	V		
15+45	7.1603	13.25	Q	V		
15+50	7.2622	14.79	Q	V		

| | | |

18+15	11.3300	6.96	Q			V
18+20	11.3774	6.89	Q			V
18+25	11.4242	6.80	Q			V
18+30	11.4704	6.70	Q			V
18+35	11.5158	6.60	Q			V
18+40	11.5606	6.50	Q			V
18+45	11.6048	6.41	Q			V
18+50	11.6483	6.32	Q			V
18+55	11.6912	6.23	Q			V
19+ 0	11.7335	6.15	Q			V
19+ 5	11.7753	6.06	Q			V
19+10	11.8165	5.99	Q			V
19+15	11.8572	5.91	Q			V
19+20	11.8974	5.84	Q			V
19+25	11.9372	5.77	Q			V
19+30	11.9764	5.70	Q			V
19+35	12.0153	5.64	Q			V
19+40	12.0537	5.58	Q			V
19+45	12.0917	5.52	Q			V
19+50	12.1293	5.46	Q			V
19+55	12.1665	5.40	Q			V
20+ 0	12.2032	5.34	Q			V
20+ 5	12.2396	5.28	Q			V
20+10	12.2756	5.22	Q			V
20+15	12.3112	5.17	Q			V
20+20	12.3464	5.12	Q			V
20+25	12.3813	5.07	Q			V
20+30	12.4158	5.02	Q			V

20+35	12.4500	4.97	Q				V
20+40	12.4839	4.92	Q				V
20+45	12.5175	4.88	Q				V
20+50	12.5508	4.83	Q				V
20+55	12.5838	4.79	Q				V
21+ 0	12.6165	4.75	Q				V
21+ 5	12.6490	4.71	Q				V
21+10	12.6812	4.67	Q				V
21+15	12.7131	4.63	Q				V
21+20	12.7447	4.60	Q				V
21+25	12.7761	4.56	Q				V
21+30	12.8073	4.52	Q				V
21+35	12.8382	4.49	Q				V
21+40	12.8689	4.46	Q				V
21+45	12.8994	4.42	Q				V
21+50	12.9296	4.39	Q				V
21+55	12.9596	4.36	Q				V
22+ 0	12.9894	4.33	Q				V
22+ 5	13.0191	4.30	Q				V
22+10	13.0485	4.27	Q				V
22+15	13.0777	4.24	Q				V
22+20	13.1067	4.21	Q				V
22+25	13.1355	4.19	Q				V
22+30	13.1642	4.16	Q				V
22+35	13.1926	4.13	Q				V
22+40	13.2209	4.11	Q				V
22+45	13.2490	4.08	Q				V
22+50	13.2770	4.06	Q				V

```
   22+55      13.3047      4.03  |Q        |         |         |        V
|
   23+ 0      13.3323      4.01  |Q        |         |         |        V
|
   23+ 5      13.3598      3.98  |Q        |         |         |        V
|
   23+10      13.3871      3.96  |Q        |         |         |        V
|
   23+15      13.4142      3.94  |Q        |         |         |        V
|
   23+20      13.4412      3.92  |Q        |         |         |
V|
   23+25      13.4680      3.89  |Q        |         |         |
V|
   23+30      13.4947      3.87  |Q        |         |         |
V|
   23+35      13.5212      3.85  |Q        |         |         |
V|
   23+40      13.5476      3.83  |Q        |         |         |
V|
   23+45      13.5738      3.81  |Q        |         |         |
V|
   23+50      13.5999      3.79  |Q        |         |         |
V|
   23+55      13.6259      3.77  |Q        |         |         |
V|
   24+ 0      13.6518      3.75  |Q        |         |         |
V|
   24+ 5      13.6757      3.48  |Q        |         |         |
V|
   24+10      13.6926      2.46  |Q        |         |         |
V|
   24+15      13.7045      1.72  Q         |         |         |
V|
   24+20      13.7139      1.36  Q         |         |         |
V|
   24+25      13.7216      1.12  Q         |         |         |
V|
   24+30      13.7280      0.93  Q         |         |         |
V|
   24+35      13.7333      0.78  Q         |         |         |
V|
   24+40      13.7379      0.66  Q         |         |         |
V|
   24+45      13.7418      0.57  Q         |         |         |
V|
   24+50      13.7452      0.49  Q         |         |         |
V|
   24+55      13.7481      0.42  Q         |         |         |
V|
   25+ 0      13.7506      0.36  Q         |         |         |
V|
   25+ 5      13.7527      0.31  Q         |         |         |
V|
   25+10      13.7545      0.26  Q         |         |         |
V|
```

```
   25+15      13.7559      0.21  Q         |         |         |
V|
   25+20      13.7571      0.17  Q         |         |         |
V|
   25+25      13.7581      0.14  Q         |         |         |
V|
   25+30      13.7588      0.11  Q         |         |         |
V|
   25+35      13.7594      0.08  Q         |         |         |
V|
   25+40      13.7597      0.05  Q         |         |         |
V|
   25+45      13.7598      0.02  Q         |         |         |
V
------------------------------------------------------------------------
```

3.1 INFILTRATION BASIN

Type of BMP	LID - Infiltration
Treatment Mechanisms	Infiltration, Evapotranspiration (when vegetated), Evaporation, and Sedimentation
Maximum Treatment Area	50 acres
Other Names	Bioinfiltration Basin

Description

An Infiltration Basin is a flat earthen basin designed to capture the design capture volume, V_{BMP}. The stormwater infiltrates through the bottom of the basin into the underlying soil over a 72 hour drawdown period. Flows exceeding V_{BMP} must discharge to a downstream conveyance system. Trash and sediment accumulate within the forebay as stormwater passes into the basin. Infiltration basins are highly effective in removing all targeted pollutants from stormwater runoff.



Figure 1 – Infiltration Basin

See Appendix A, and Appendix C, Section 1 of *Basin Guidelines*, for additional requirements.

Siting Considerations

The use of infiltration basins may be restricted by concerns over ground water contamination, soil permeability, and clogging at the site. See the applicable WQMP for any specific feasibility considerations for using infiltration BMPs. Where this BMP is being used, the soil beneath the basin must be thoroughly evaluated in a geotechnical report since the underlying soils are critical to the basin's long term performance. To protect the basin from erosion, the sides and bottom of the basin must be vegetated, preferably with native or low water use plant species.

In addition, these basins may not be appropriate for the following site conditions:

- Industrial sites or locations where spills of toxic materials may occur
- Sites with very low soil infiltration rates
- Sites with high groundwater tables or excessively high soil infiltration rates, where pollutants can affect ground water quality
- Sites with unstabilized soil or construction activity upstream
- On steeply sloping terrain
- Infiltration basins located in a fill condition should refer to Appendix A of this Handbook for details on special requirements/restrictions

Setbacks

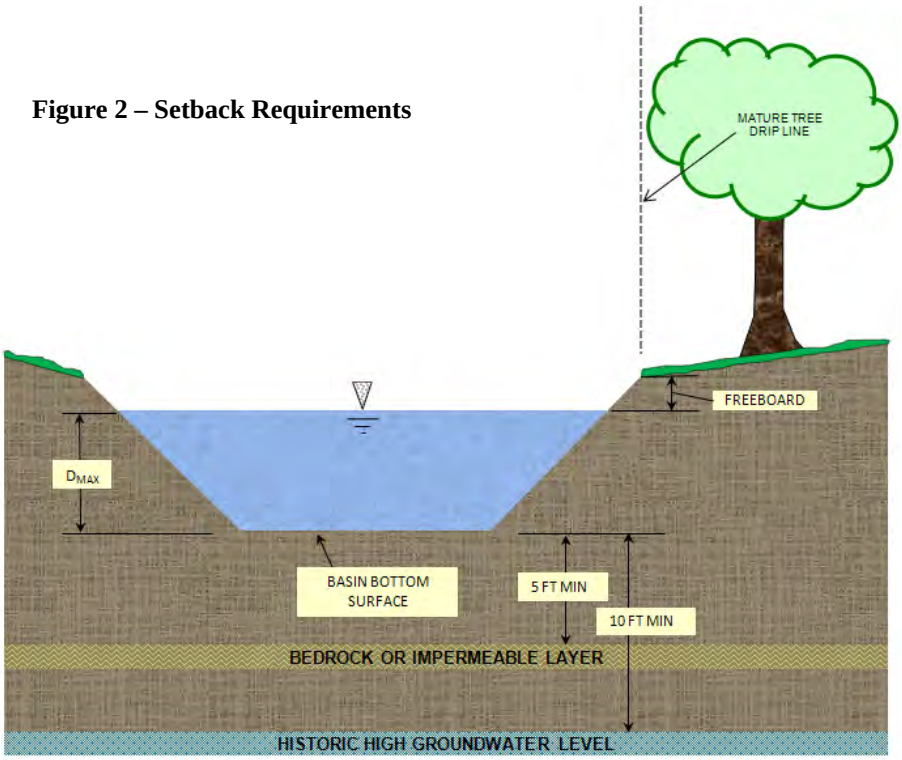
Always consult your geotechnical engineer for site specific recommendations regarding setbacks for infiltration trenches. Recommended setbacks are needed to protect buildings, existing trees, walls, onsite or nearby wells, streams, and tanks. Setbacks should be considered early in the design process since they can affect where infiltration facilities may be placed and how deep they are allowed to be. For instance, depth setbacks can dictate fairly shallow facilities that will have a larger footprint and, in some cases, may make an infiltration basin infeasible. In that instance, another BMP must be selected.

Infiltration basins typically must be set back:

- 10 feet from the historic high groundwater (measured vertically from the bottom of the basin, as shown in Figure 2)
- 5 feet from bedrock or impermeable surface layer (measured vertically from the bottom of the basin, as shown in Figure 2)
- From all existing mature tree drip lines as indicated in Figure 2 (to protect their root structure)
- 100 feet horizontally from wells, tanks or springs

Setbacks to walls and foundations must be included as part of the Geotechnical Report. All other setbacks shall be in accordance with applicable standards of the District's *Basin Guidelines* (Appendix C).

Figure 2 – Setback Requirements



Forebay

A concrete forebay shall be provided to reduce sediment clogging and to reduce erosion. The forebay shall have a design volume of at least 0.5% V_{BMP} and a minimum 1 foot high concrete splashwall / berm. Full height notch-type weir(s), offset from the line of flow from the basin inlet to prevent short circuiting, shall be used to outlet the forebay. It is recommended that two weirs be used and that they be located on opposite sides of the forebay (see Figure 2).

Overflow

Flows exceeding V_{BMP} must discharge to an acceptable downstream conveyance system. Where an adequate outlet is present, an overflow structure may be used. Where an embankment is present, an emergency spillway may be used instead. Overflows must be placed just above the design water surface for V_{BMP} and be near the outlet of the system. The overflow structure shall be similar to the District's Standard Drawing CB 110. Additional details may be found in the District's *Basin Guidelines* (Appendix C).

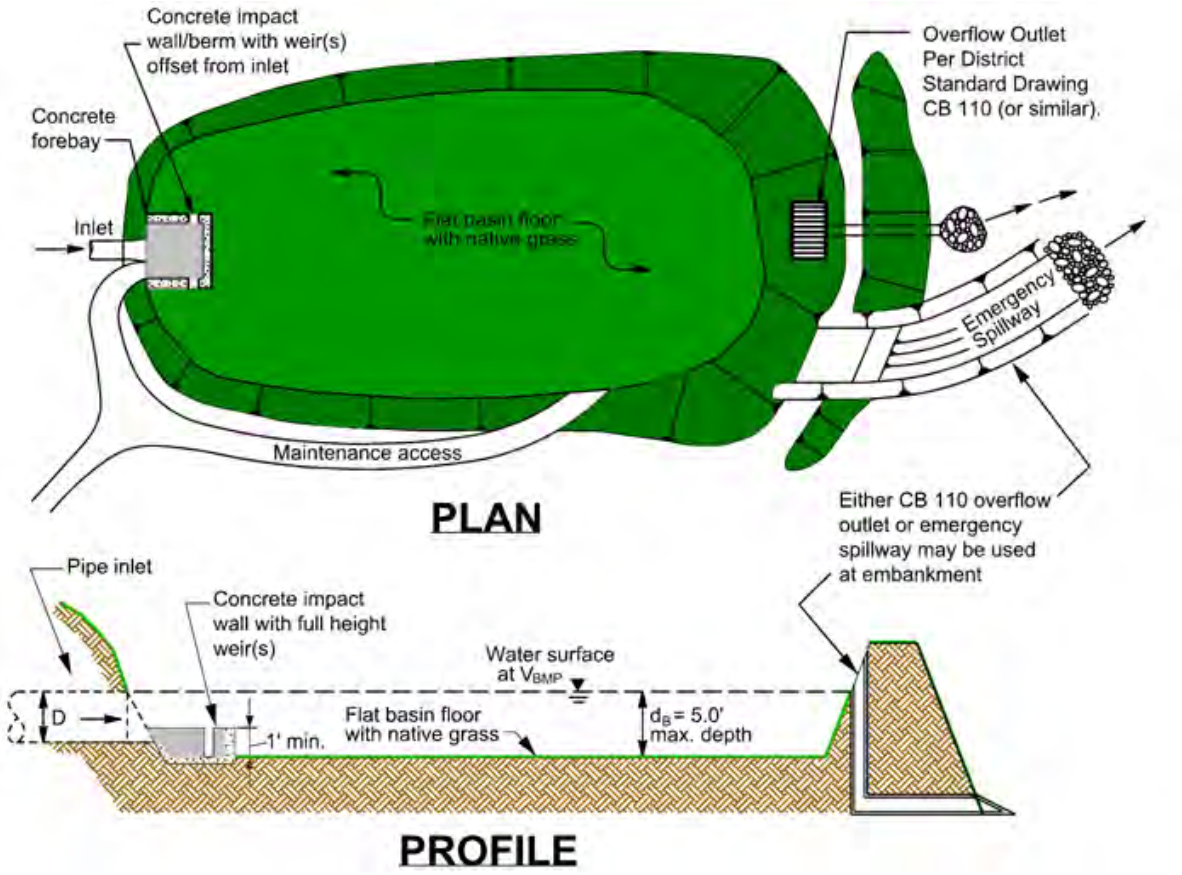


Figure 3 – Infiltration Basin

Landscaping Requirements

Basin vegetation provides erosion protection, improves sediment removal and assists in allowing infiltration to occur. The basin surface and side slopes shall be planted with native grasses. Proper landscape management is also required to ensure that the vegetation does not contribute to water pollution through pesticides, herbicides, or fertilizers. Landscaping shall be in accordance with County of Riverside Ordinance 859 and the District's *Basin Guidelines* (Appendix C), or other guidelines issued by the Engineering Authority.

Maintenance

Normal maintenance of an infiltration basin includes the maintenance of landscaping, debris and trash removal from the surface of the basin, and tending to problems associated with standing water (vectors, odors, etc.). Significant ponding, especially more than 72 hours after an event, may indicate that the basin surface is no longer providing sufficient infiltration and requires aeration. See the District's *Basin Guidelines* (Appendix C) for additional requirements (i.e., fencing, maintenance access, etc.).

Table 1 - Inspection and Maintenance

Schedule	Inspection and Maintenance Activity
Ongoing including just before annual storm seasons and following rainfall events.	• Maintain vegetation as needed. Use of fertilizers, pesticides and herbicides should be strenuously avoided to ensure they don't contribute to water pollution. If appropriate native plant selections and other IPM methods are used, such products shouldn't be needed. If such projects are used, o Products shall be applied in accordance with their labeling, especially in relation to application to water, and in areas subjected to flooding. o Fertilizers should not be applied within 15 days before, after, or during the rain season. • Remove debris and litter from the entire basin to minimize clogging and improve aesthetics. • Check for obvious problems and repair as needed. Address odor, insects, and overgrowth issues associated with stagnant or standing water in the basin bottom. There should be no long-term ponding water. • Check for erosion and sediment laden areas in the basin. Repair as needed. Clean forebay if needed. • Revegetate side slopes where needed.
Annually. If possible, schedule these inspections within 72 hours after a significant rainfall.	• Inspection of hydraulic and structural facilities. Examine the inlet for blockage, the embankment and spillway integrity, as well as damage to any structural element. • Check for erosion, slumping and overgrowth. Repair as needed. • Check basin depth for sediment build up and reduced total capacity. Scrape bottom as needed and remove sediment. Restore to original cross-section and infiltration rate. Replant basin vegetation. • Verify the basin bottom is allowing acceptable infiltration. Use a disc or other method to aerate basin bottom only if there is actual significant loss of infiltrative capacity, rather than on a routine basis[1]. • No water should be present 72 hours after an event. No long term standing water should be present at all. No algae formation should be visible. Correct problem as needed.

1. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**

Table 2 - Design and Sizing Criteria for Infiltration Basins

Design Parameter	Infiltration Basin
Design Volume	V_{BMP}
Forebay Volume	0.5% V_{BMP}
Drawdown time (maximum)	72 hours
Maximum tributary area	50 acres [2]
Minimum infiltration rate	Must be sufficient to drain the basin within the required Drawdown time over the life of the BMP. The WQMP may include specific requirements for minimum tested infiltration rates.
Maximum Depth	5 feet
Spillway erosion control	Energy dissipators to reduce velocities[1]
Basin Slope	0%
Freeboard (minimum)	1 foot [1]
Historic High Groundwater Setback (max)	10 feet
Bedrock/impermeable layer setback (max)	5 feet
Tree setbacks	Mature tree drip line must not overhang the basin
Set back from wells, tanks or springs	100 feet
Set back from foundations	As recommended in Geotechnical Report

1. **Ventura County's Technical Guidance Manual for Stormwater Quality Control Measures**
2. **CA Stormwater BMP Handbook for New Development and Significant Redevelopment**

Note: The information contained in this BMP Factsheet is intended to be a summary of design considerations and requirements. Additional information which applies to all detention basins may be found in the District's Basin Guidelines (Appendix C). In addition, information herein may be superseded by other guidelines issued by the co-permittee.

INFILTRATION BASIN SIZING PROCEDURE

1. Find the Design Volume, V_{BMP}.
   a) Enter the Tributary Area, $A_{T.}$
   b) Enter the Design Volume, V_{BMP}, determined from Section 2.1 of this Handbook.
2. Determine the Maximum Depth.
   a) Enter the infiltration rate. The infiltration rate shall be established as described in Appendix A: "Infiltration Testing".
   b) Enter the design Factor of Safety from Table 1 in Appendix A: "Infiltration Testing".
   c) The spreadsheet will determine D_1, the maximum allowable depth of the basin based on the infiltration rate along with the maximum drawdown time (72 hours) and the Factor of Safety.

$$D_1 = [(t) \times (I)] / 12s$$

Where I = site infiltration rate (in/hr)
s = safety factor
t = drawdown time (maximum 72 hours)

d) Enter the depth of freeboard.

e) Enter the depth to the historic high groundwater level measured from the top of the basin.

f) Enter the depth to the top of bedrock or other impermeable layer measured from the finished grade.

g) The spreadsheet will determine D_2, the total basin depth (including freeboard, if used) of the basin, based on restrictions to the depth by groundwater and an impermeable layer.

D_2 = Depth to groundwater – (10 + freeboard) (ft);

or

D_2 = Depth to impermeable layer – (5 + freeboard) (ft)

Whichever is least.

h) The spreadsheet will determine the maximum allowable effective depth of basin, D_{MAX}, based on the smallest value between D_1 and D_2. D_{MAX} is the maximum depth of water only and does not include freeboard. D_{MAX} shall not exceed 5 feet.

3. Basin Geometry

a) Enter the basin side slopes, z (no steeper than 4:1).

b) Enter the proposed basin depth, d_B excluding freeboard.

c) The spreadsheet will determine the minimum required surface area of the basin:

$$A_s = V_{BMP} / d_B$$

Where A_s = minimum area required (ft^2)
V_{BMP} = volume of the infiltration basin (ft^3)
d_B= proposed depth not to exceed maximum allowable depth, D_{MAX} (ft)

d) Enter the proposed bottom surface area. This area shall not be less than the minimum required surface area.

4. Forebay

A concrete forebay with a design volume of at least 0.5% V_{BMP} and a minimum 1 foot high concrete splashwall shall be provided. Full-height rectangular weir(s) shall be used to outlet the forebay. The weir(s) must be offset from the line of flow from the basin inlet. It is recommended that two weirs be used and that they be located on opposite sides of the forebay (see Figure 2).

a) The spreadsheet will determine the minimum required forebay volume based on 0.5% V_{BMP}.

b) Enter the proposed depth of the forebay berm/splashwall (1foot minimum).

c) The spreadsheet will determine the minimum required forebay surface area.

d) Enter the width of rectangular weir to be used (minimum 1.5 inches). Weir width should be established based on a 5 minute drawdown time.

NOAA Atlas 14, Volume 6, Version 2
Location name: Hesperia, California, USA*
Latitude: 34.4371°, Longitude: -117.3766°
Elevation: 3440.77 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.083** (0.068-0.101)	**0.118** (0.098-0.145)	**0.166** (0.136-0.203)	**0.204** (0.167-0.252)	**0.257** (0.203-0.329)	**0.299** (0.231-0.390)	**0.341** (0.257-0.456)	**0.385** (0.283-0.529)	**0.445** (0.314-0.638)	**0.493** (0.335-0.731)
10-min	**0.118** (0.098-0.145)	**0.170** (0.140-0.207)	**0.237** (0.196-0.291)	**0.293** (0.239-0.362)	**0.369** (0.292-0.471)	**0.428** (0.331-0.558)	**0.488** (0.369-0.653)	**0.552** (0.405-0.759)	**0.638** (0.449-0.915)	**0.706** (0.481-1.05)
15-min	**0.143** (0.119-0.175)	**0.205** (0.170-0.251)	**0.287** (0.236-0.352)	**0.354** (0.289-0.437)	**0.446** (0.353-0.570)	**0.517** (0.400-0.675)	**0.591** (0.446-0.790)	**0.667** (0.490-0.917)	**0.772** (0.544-1.11)	**0.854** (0.581-1.27)
30-min	**0.217** (0.180-0.265)	**0.311** (0.257-0.380)	**0.435** (0.359-0.533)	**0.537** (0.439-0.664)	**0.677** (0.535-0.865)	**0.785** (0.608-1.02)	**0.896** (0.677-1.20)	**1.01** (0.743-1.39)	**1.17** (0.824-1.68)	**1.30** (0.881-1.92)
60-min	**0.302** (0.250-0.369)	**0.433** (0.358-0.530)	**0.606** (0.499-0.743)	**0.747** (0.611-0.924)	**0.942** (0.744-1.20)	**1.09** (0.846-1.43)	**1.25** (0.942-1.67)	**1.41** (1.03-1.94)	**1.63** (1.15-2.34)	**1.80** (1.23-2.68)
2-hr	**0.434** (0.359-0.530)	**0.590** (0.488-0.722)	**0.802** (0.661-0.983)	**0.979** (0.800-1.21)	**1.23** (0.971-1.57)	**1.43** (1.11-1.86)	**1.64** (1.24-2.19)	**1.86** (1.36-2.55)	**2.17** (1.53-3.11)	**2.42** (1.64-3.58)
3-hr	**0.548** (0.453-0.669)	**0.733** (0.605-0.895)	**0.985** (0.812-1.21)	**1.20** (0.981-1.48)	**1.51** (1.19-1.92)	**1.75** (1.36-2.29)	**2.01** (1.52-2.69)	**2.29** (1.68-3.15)	**2.69** (1.89-3.85)	**3.01** (2.05-4.47)
6-hr	**0.766** (0.634-0.935)	**1.01** (0.838-1.24)	**1.36** (1.12-1.67)	**1.66** (1.35-2.05)	**2.09** (1.65-2.66)	**2.44** (1.89-3.18)	**2.81** (2.12-3.76)	**3.22** (2.37-4.43)	**3.81** (2.69-5.46)	**4.30** (2.93-6.38)
12-hr	**0.980** (0.811-1.20)	**1.34** (1.11-1.64)	**1.84** (1.51-2.25)	**2.27** (1.85-2.80)	**2.88** (2.28-3.69)	**3.39** (2.63-4.43)	**3.93** (2.97-5.26)	**4.53** (3.32-6.23)	**5.38** (3.79-7.72)	**6.09** (4.15-9.04)
24-hr	**1.34** (1.19-1.54)	**1.89** (1.68-2.18)	**2.66** (2.35-3.08)	**3.33** (2.91-3.88)	**4.28** (3.63-5.16)	**5.06** (4.20-6.22)	**5.90** (4.78-7.43)	**6.80** (5.36-8.81)	**8.11** (6.13-11.0)	**9.20** (6.72-12.8)
2-day	**1.50** (1.33-1.72)	**2.11** (1.87-2.44)	**2.98** (2.63-3.44)	**3.72** (3.26-4.34)	**4.81** (4.08-5.80)	**5.71** (4.74-7.03)	**6.69** (5.42-8.42)	**7.75** (6.10-10.0)	**9.30** (7.03-12.6)	**10.6** (7.74-14.8)
3-day	**1.60** (1.42-1.84)	**2.25** (1.99-2.60)	**3.17** (2.80-3.66)	**3.96** (3.47-4.62)	**5.13** (4.35-6.18)	**6.10** (5.06-7.50)	**7.15** (5.79-9.01)	**8.31** (6.54-10.8)	**10.00** (7.56-13.5)	**11.4** (8.34-15.9)
4-day	**1.73** (1.53-1.99)	**2.42** (2.15-2.79)	**3.40** (3.00-3.93)	**4.26** (3.73-4.96)	**5.51** (4.67-6.63)	**6.55** (5.43-8.05)	**7.67** (6.22-9.67)	**8.91** (7.02-11.5)	**10.7** (8.11-14.5)	**12.3** (8.96-17.1)
7-day	**1.92** (1.70-2.21)	**2.66** (2.36-3.07)	**3.71** (3.28-4.29)	**4.62** (4.05-5.38)	**5.95** (5.04-7.16)	**7.05** (5.85-8.66)	**8.24** (6.67-10.4)	**9.54** (7.52-12.4)	**11.4** (8.65-15.4)	**13.0** (9.53-18.2)
10-day	**2.05** (1.82-2.36)	**2.84** (2.52-3.27)	**3.94** (3.48-4.55)	**4.89** (4.28-5.70)	**6.27** (5.31-7.55)	**7.41** (6.15-9.11)	**8.64** (7.00-10.9)	**9.99** (7.87-12.9)	**12.0** (9.04-16.1)	**13.6** (9.93-19.0)
20-day	**2.49** (2.21-2.87)	**3.42** (3.03-3.94)	**4.71** (4.16-5.44)	**5.82** (5.10-6.78)	**7.43** (6.30-8.95)	**8.76** (7.27-10.8)	**10.2** (8.25-12.8)	**11.7** (9.25-15.2)	**14.0** (10.6-18.9)	**15.9** (11.6-22.2)
30-day	**2.94** (2.60-3.38)	**4.00** (3.54-4.61)	**5.48** (4.84-6.33)	**6.75** (5.91-7.87)	**8.59** (7.28-10.3)	**10.1** (8.39-12.4)	**11.7** (9.50-14.8)	**13.5** (10.6-17.5)	**16.1** (12.2-21.7)	**18.3** (13.4-25.5)
45-day	**3.48** (3.08-4.00)	**4.68** (4.14-5.39)	**6.34** (5.60-7.33)	**7.78** (6.81-9.06)	**9.85** (8.35-11.9)	**11.5** (9.59-14.2)	**13.4** (10.8-16.9)	**15.4** (12.1-20.0)	**18.3** (13.9-24.8)	**20.8** (15.2-29.1)
60-day	**3.95** (3.50-4.55)	**5.24** (4.64-6.03)	**7.01** (6.19-8.11)	**8.55** (7.48-9.96)	**10.8** (9.12-13.0)	**12.6** (10.4-15.5)	**14.6** (11.8-18.3)	**16.7** (13.2-21.7)	**19.9** (15.1-26.9)	**22.6** (16.5-31.6)

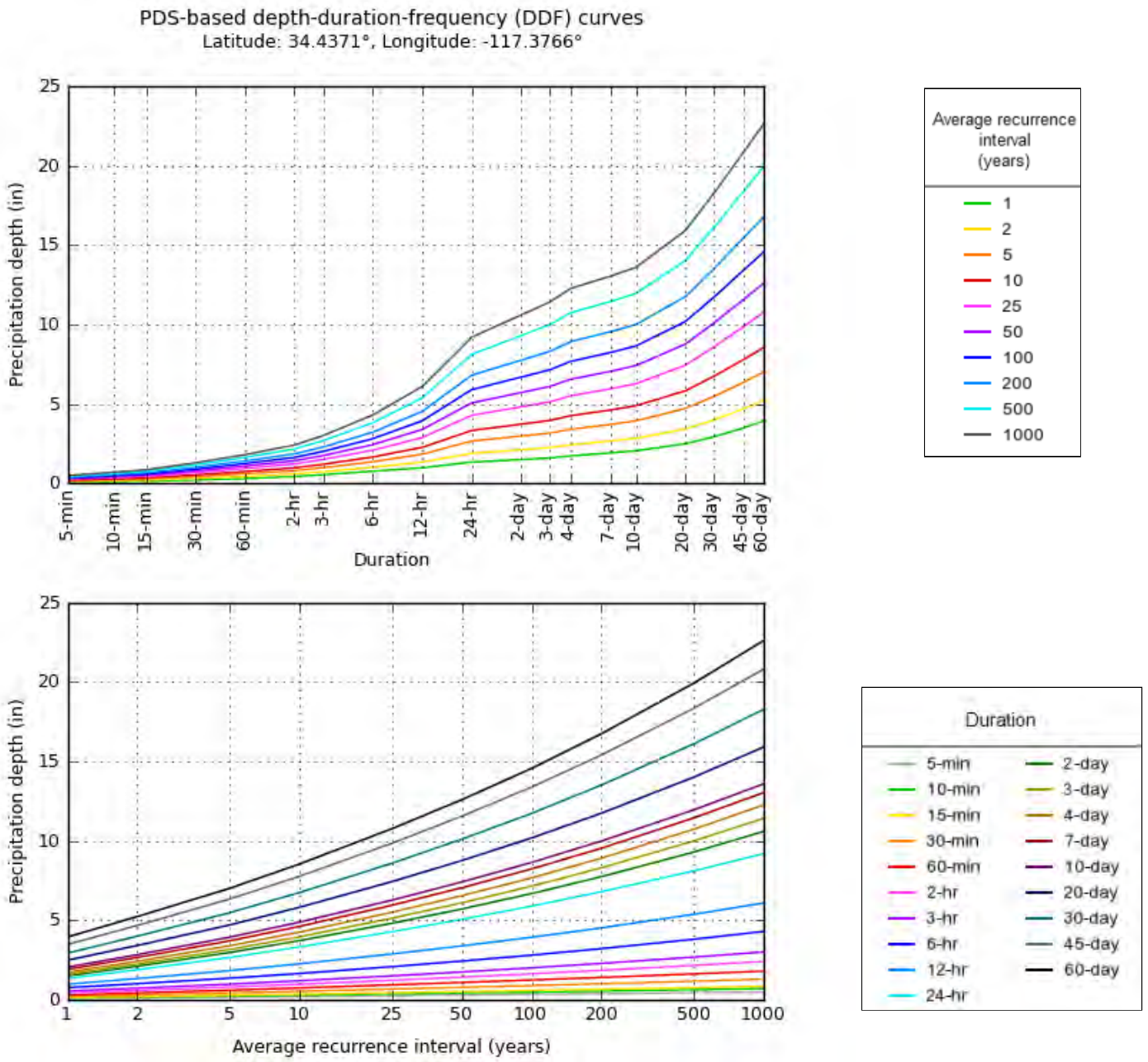
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



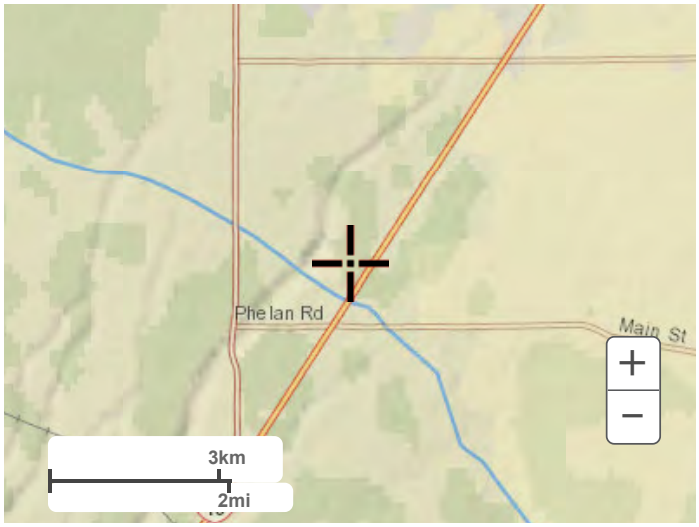
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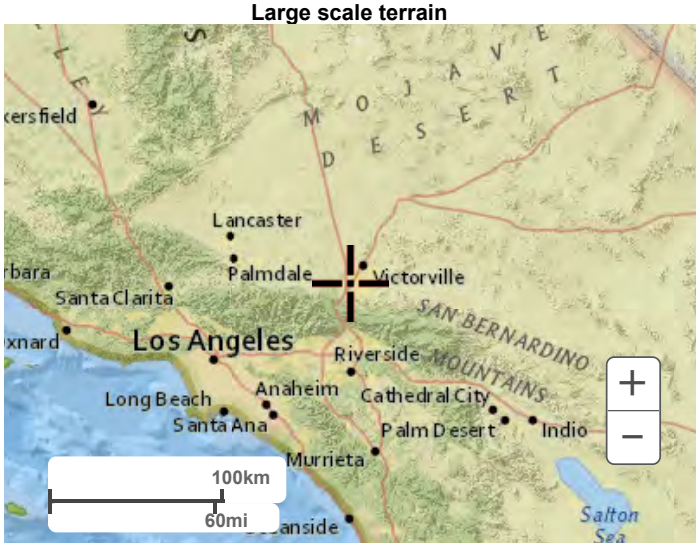
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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

APPENDIX J
Amargosa and Palmetto High-Cube Warehouse Noise Impact and Vibration Analysis

Amargosa and Palmetto High-Cube Warehouse

NOISE IMPACT AND VIBRATION ANALYSIS

CITY OF HESPERIA

PREPARED BY:

Bill Lawson, PE, INCE
blawson@urbanxroads.com
(949) 584-3148

JANUARY 27, 2023

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
OPR	Office of Planning and Research
PPV	Peak particle velocity
Project	Amargosa and Palmetto High-Cube Warehouse
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Amargosa and Palmetto High-Cube Warehouse development ("Project"). The proposed Project is to consist of 499,850 square high-cube fulfillment center warehouse building in a single building. This study has been prepared to satisfy applicable City of Hesperia standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1).

The results of this Amargosa and Palmetto High-Cube Warehouse Noise Impact and Vibration Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	*Less Than Significant*	-
Operational Noise	9	*Less Than Significant*	-
Construction Noise	10	*Less Than Significant*	-
Nighttime Concrete Pour Noise		*Less Than Significant*	-
Construction Vibration		*Less Than Significant*	-

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Amargosa and Palmetto High-Cube Warehouse ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The proposed project is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project is to consist of 499,850 square high-cube fulfillment center warehouse building as shown on Exhibit 1-B. the proposed project is anticipated to be constructed and fully operational by year 2024.

The on-site Project-related noise sources are expected to include: loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site.

EXHIBIT 1-A: LOCATION MAP

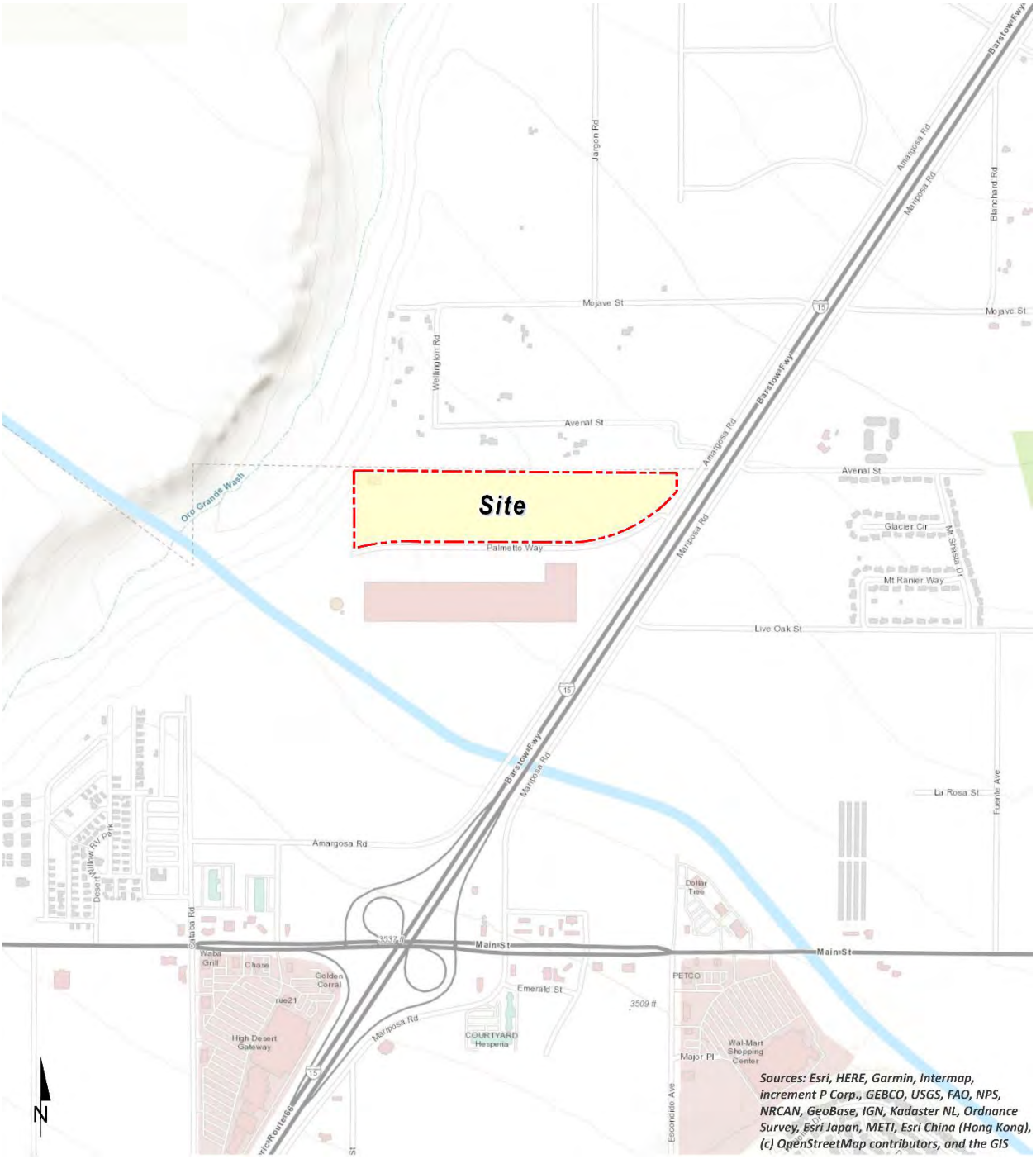
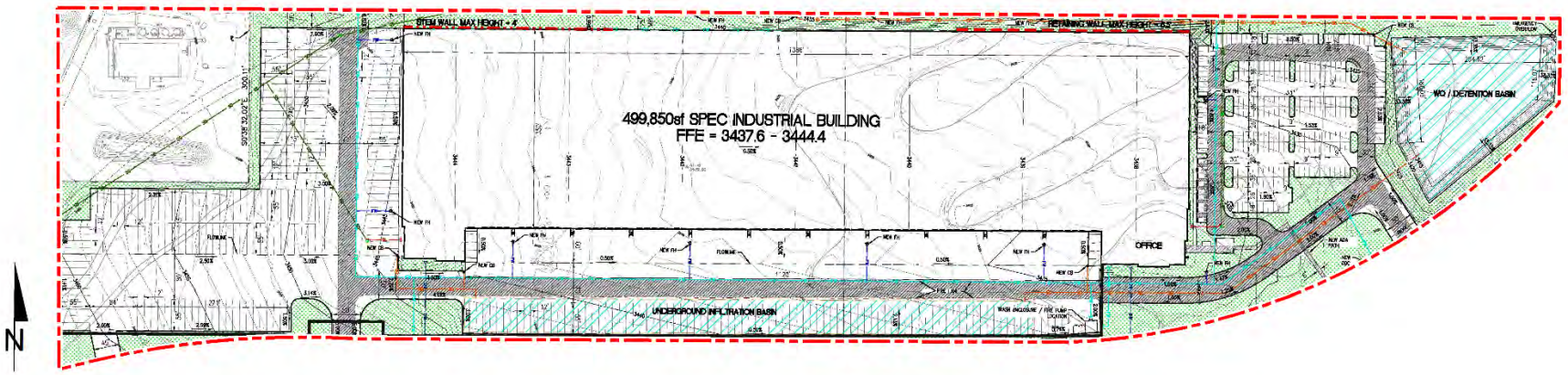


EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used metric is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Hesperia relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually

sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (5)

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must block the line-of-sight path of sound from the noise source.

2.6 LAND USE COMPATIBILITY WITH NOISE

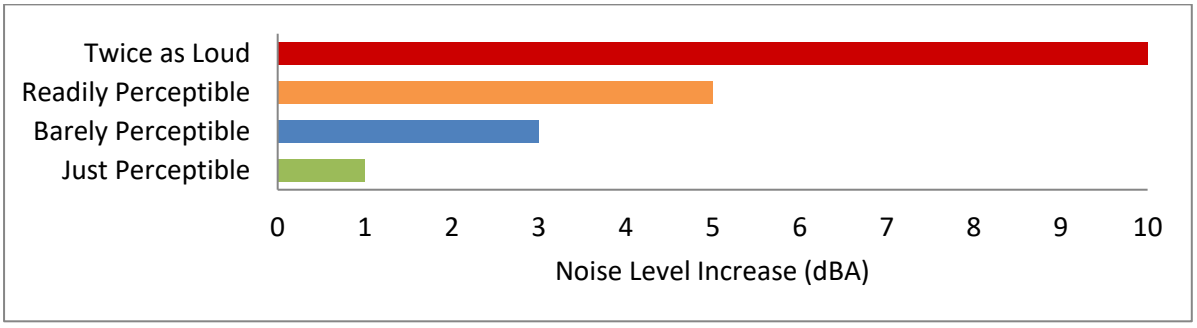
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



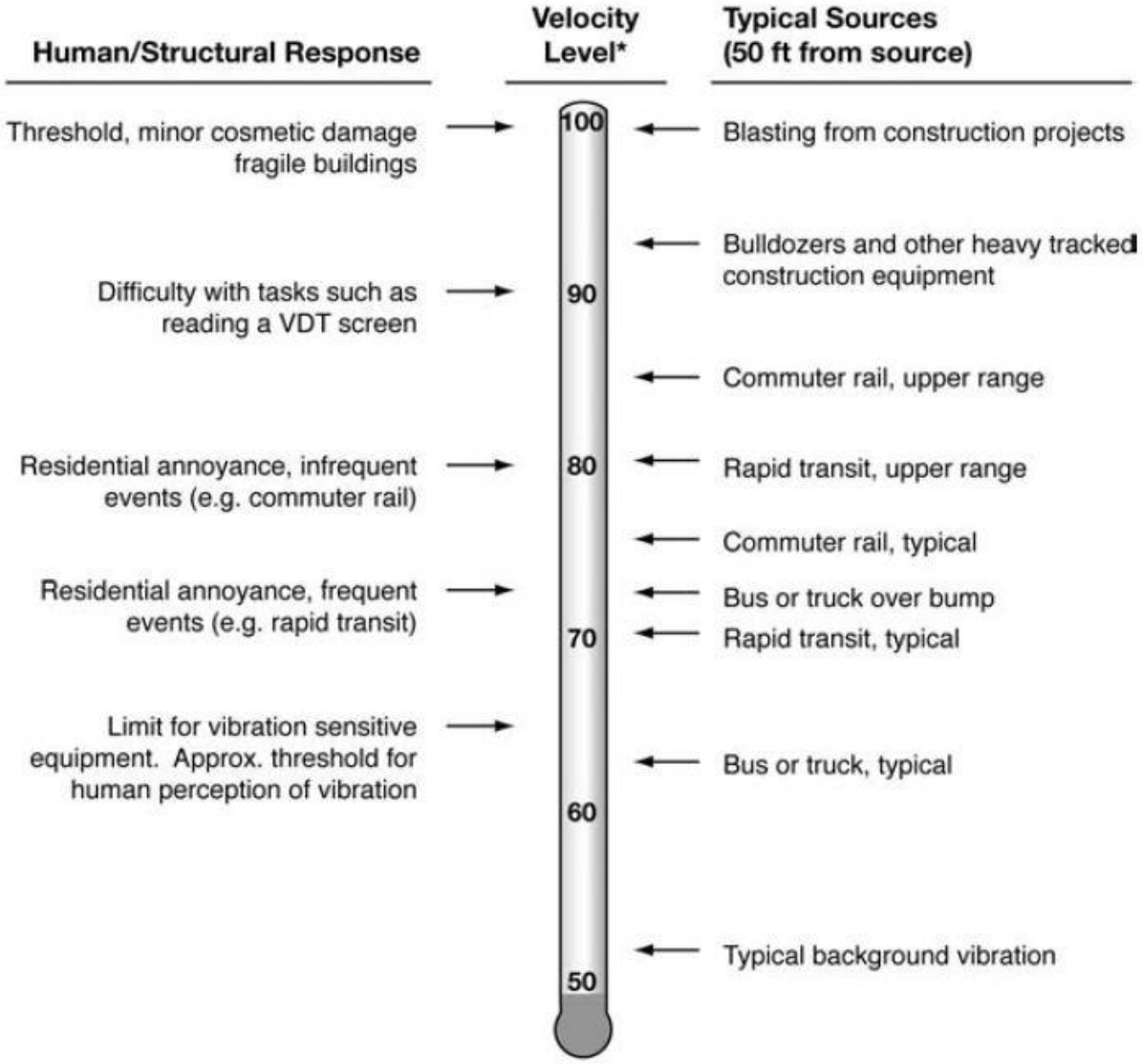
2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Impact Assessment Manual* (8) , vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment and/or activities.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



* *RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

Source: Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.

3 REGULATORY SETTING

The federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (9) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF HESPERIA GENERAL PLAN NOISE ELEMENT

The City of Hesperia has adopted a Noise Element of the General Plan (10) to control and abate environmental noise, and to protect the citizens of the City of Hesperia from excessive exposure to noise. The General Plan Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the City of Hesperia General Plan Noise Element identifies several goals and policies to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To limit the exposure of City residents to excessive noise, the City of Hesperia General Plan Noise Element contains the following two goals:

NS-1 *To achieve and maintain an environment which is free from excessive or harmful noise through identification, control, and abatement.*

NS-2 *To achieve and maintain an environment which is free from excessive vibration.*

To satisfy these two overarching goals, the General Plan Noise Element identifies the following implementation policies to reduce noise levels associated with the development of the Project.

NS-1.2 *Control and abate undesirable sounds through the use of the land use compatibility criteria shown in Exhibit NS-1, Table NS-3, and the Municipal Code Section 16.20.125(B).*

NS-1.5 Require the design and construction of commercial, industrial, office and mixed-use structures developments with noise attenuation methods to minimize excessive noise upon noise-sensitive land uses.

NS-1.9 Encourage commercial, industrial, office and mixed-use developments to locate loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noisier components away from noise-sensitive land uses.

NS-1.10 Limit the hours of construction activity in, and around, residential areas in order to reduce the intrusion of noise in the early morning and late evening hours and on weekends and holidays.

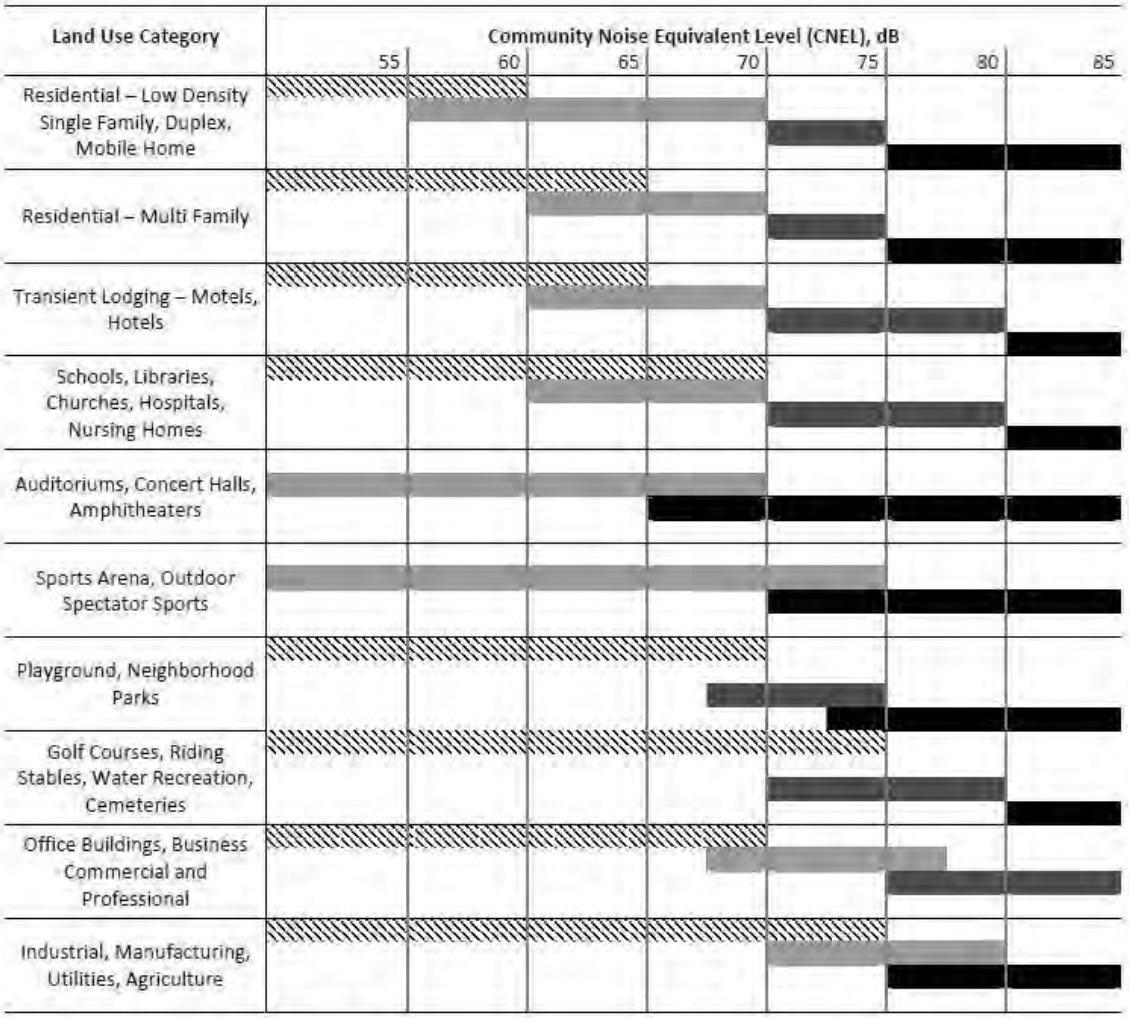
NS-1.11 Limit delivery hours for businesses with loading areas or docks fronting, siding, or bordering or gaining access on driveways adjacent to noise-sensitive areas.

NS-1.12 Implement nighttime and daytime on-site noise level limits to address noise generated by commercial and industrial uses where it affects abutting residential and other noise-sensitive land uses.

The State of California Land Use Compatibility Plan (Exhibit NS-1) in the City of Hesperia General Plan Noise Element lists land use categories and the acceptable and unacceptable levels of community noise exposure. The compatibility criteria shown on Table NS-1 (and Exhibit 3-A of this report) provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

The State of California Land Use Compatibility Plan describes categories of compatibility, but not specific noise standards. According to these categories of transportation-related noise compatibility, the Amargosa and Palmetto High-Cube Warehouse industrial land uses are considered *normally acceptable* with unmitigated exterior noise levels below 75 dBA CNEL and *conditionally acceptable* with noise levels between 70 and 80 dBA CNEL. For *conditionally acceptable* land use, *"new construction or development should be undertaken only after a detailed analysis of noise reduction requirements are made* (10).

EXHIBIT 3-A: LAND USE NOISE COMPATIBILITY CRITERIA



Source: State of California General Plan Guidelines (2003)

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Amargosa and Palmetto High-Cube Warehouse, stationary-source (operational) noise such as the expected loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements are typically evaluated against standards established under a jurisdiction's Municipal Code.

Section 16.20.125 of the City of Hesperia Municipal Code included in Appendix 3.1, establishes the noise level standards for stationary noise sources and establishes noise level limits for affected land uses. Since the Project land use will potentially impact a combination of non-noise-sensitive and noise sensitive uses in the Project study area, this noise study relies on the exterior noise level standards for all land uses identified by the City of Hesperia Municipal Code.

For non-noise sensitive industrial uses, the maximum exterior noise level shall not exceed 70 dBA L_{eq} at any time, while the maximum exterior noise level exterior noise levels at non-noise sensitive commercial uses shall not exceed 65 dBA L_{eq} at any time. For noise sensitive residential properties, the maximum exterior noise level shall not exceed 60 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 50 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.). (11) In addition, except for the nighttime hours from 10:00 p.m. to 7:00 a.m.) the maximum permissible noise levels due to wind noise may be adjusted so that it is no greater than five dB(A) above the ambient noise level. The Municipal Code operational noise level standards are summarized on Table 3-1.

TABLE 3-1: OPERATIONAL NOISE STANDARDS

Jurisdiction	Receiving Land Use	Time Period	Exterior Noise Level Standard (dBA L_{eq})[2]
City of Hesperia[1]	A-1, A-2, R-1, R-3, and RR Zone Districts	Daytime (7:00 a.m. - 10:00 p.m.)	60
		Nighttime (10:00 p.m. - 7:00 a.m.)	55
	C-1, C-2, C-3, C-4, C-R, AP, and P-I Zone Districts	Anytime	65
	I-1 and I-2 Zone	Anytime	70

[1] City of Hesperia Municipal Code, Section 16.20.125 (Appendix 3.1).
[2] L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period.

3.4 CONSTRUCTION NOISE STANDARDS

The City of Hesperia Municipal Code, Section 16.20.125.E.3 exempts construction noise from its stationary-source noise level limits between seven a.m. and seven p.m. and at any time on Sundays and federal holidays. (11) In addition, neither the City of Hesperia General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for

construction noise assessment. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use (8 p. 179).

3.5 VIBRATION STANDARDS

The City of Hesperia Municipal Code, Section 16.20.130, identifies an operational vibration level threshold of 0.2 in/sec PPV which is used in this report to evaluate potential impacts due to on-site Project related operational vibration level activities at nearby receiver locations. (11) According to Section 16.20.130.C.2, temporary construction, maintenance, or demolition activities are considered exempt provided that construction vibration activity is limited the hours between seven a.m. and seven p.m. including Sundays and federal holidays.

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4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

4.1 NOISE LEVEL INCREASES (THRESHOLD A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (12) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (13) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders the noise impact significant*, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (12) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be

appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (14 p. 2_48).

4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The City of Hesperia General Plan Noise Element, Exhibit NS-1, *Land Use Compatibility Criteria* was used to establish the satisfactory noise levels of significance for non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the *normally acceptable* exterior noise level for non-noise-sensitive land uses is 75 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered *conditionally acceptable* per the *Land Use Compatibility for Community Noise Exposure*. (10) To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 75 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on the City of Hesperia General Plan Noise Element, Table N-1, *Land Use Compatibility for Community Noise Exposure normally acceptable* 70 dBA CNEL exterior noise level criteria.

4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration impacts originating from the construction of the Amargosa and Palmetto High-Cube Warehouse, vibration-generating activities are appropriately evaluated using the City of Hesperia threshold to assess potential temporary construction-related impacts at nearby receiver locations. The City of Hesperia Municipal Code identifies an operational vibration level threshold of 0.2 in/sec PPV.

4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The Project site is not located within two miles of an airport or airstrip. The closest airport is the Hesperia Airport located roughly 5.5 miles southeast of the Project site. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant,* and no further noise analysis is conducted in relation to Appendix G to the CEQA Guidelines, Noise Threshold C.

4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed Project. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic	Noise-Sensitive[1]	If ambient is < 60 dBA Leq	≥ 5 dBA L_{eq} Project increase	
		If ambient is 60 - 65 dBA Leq	≥ 3 dBA L_{eq} Project increase	
		If ambient is > 65 dBA Leq	≥ 1.5 dBA L_{eq} Project increase	
	Non-Noise-Sensitive[2]	if ambient is > 75 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational	Multiple	Exterior Noise Level Standards	See Table 3-1.	
	Noise-Sensitive[1]	If ambient is < 60 dBA Leq	≥ 5 dBA L_{eq} Project increase	
		If ambient is 60 - 65 dBA Leq	≥ 3 dBA L_{eq} Project increase	
		If ambient is > 65 dBA Leq	≥ 1.5 dBA L_{eq} Project increase	
		Vibration Level Threshold[3]	0.2 in/sec PPV	
Construction	All	Permitted hours of 7:00 a.m. to7:00 p.m. except Sunday or a federal holiday[4]		
		Noise Level Threshold[5]	80 dBA L_{eq}	n/a
		Vibration Level Threshold[3]	0.2 in/sec PPV	n/a

[1] FICON, 1992.
[2] City of Hesperia General Plan Noise Element Exhibit NS-1 Land Use Compatibility Criteria.
[3] City of Hesperia Municipal Code, Section 16.20.130.A (Appendix 3.1).
[4] City of Hesperia Municipal Code, Section 16.20.125.E.3 (Appendix 3.1).
[5] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "PPV" = peak particle velocity.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at five locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, June 21th, 2022. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (15)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (2) Further, FTA guidance states, t*hat it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*. (8)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels

and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

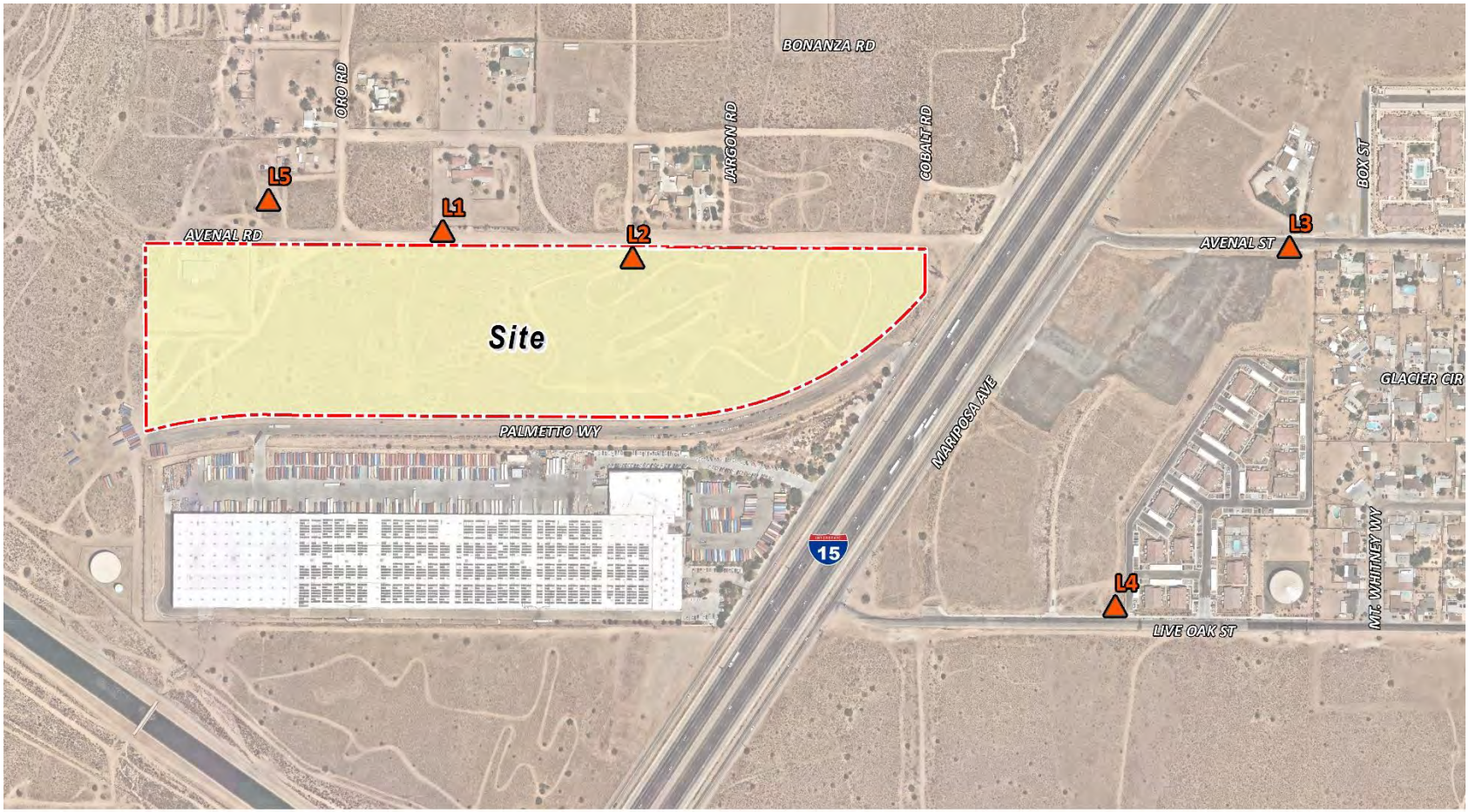
TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]	
		Daytime	Nighttime
L1	Located north of the Project Site near the existing noise sensitive residence at 13030 Avenal Street.	61.0	58.2
L2	Located south of the existing noise sensitive residence at 13164 Avenal Road with the Project Site.	55.6	55.2
L3	Located east of the Project site near the existing noise sensitive residence at 10445 Avenal Street.	58.6	58.4
L4	Located southeast of the Project site near the existing noise sensitive residence at 10122 Mt. Whitney Way.	62.7	61.7
L5	Located south of the existing noise sensitive residence at 10376 Wellington Road.	52.3	51.5

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2. "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with the State of California Land Use Compatibility Plan (see Exhibit 3-A), all transportation related noise levels are presented in terms of the 24-hour CNEL's.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (16) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (17) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (18)

6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the seven off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Hesperia General Plan Circulation Element, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis*, prepared by the Ganddini Group, Inc.. (19)

- Existing Conditions
- Opening Year (2024) Without Project Conditions (OYC).
- Opening Year (2024) With Project Conditions (OYCP).
- General Plan Buildout (2040) Without Project Conditions (HY).
- General Plan Buildout (2040) With Project Conditions (HYP).

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic study.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Classification[1]	Receiving Land Use[2]	Distance from Centerline to Receiving Land Use (Feet)[3]	Vehicle Speed (mph)
1	Key Pointe Dr.	s/o Amargosa Rd.	Secondary	Non-Sensitive	40'	45
2	Amargosa Rd.	n/o Palmetto Wy.	Arterial	Sensitive	50'	50
3	Amargosa Rd.	w/o Key Pointe Dr.	Arterial	Sensitive	50'	50
4	Amargosa Rd.	e/o Key Pointe Dr.	Arterial	Non-Sensitive	50'	50
5	Main St.	w/o Key Pointe Dr.	Major Arterial	Sensitive	60'	55
6	Main St.	e/o Key Pointe Dr.	Major Arterial	Non-Sensitive	60'	55
7	Main St.	e/o I-15 NB Ramps	Major Arterial	Non-Sensitive	60'	55

[1] City of Hesperia General Plan Circulation Element.
[2] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[3] Distance to receiving land use is based upon the right-of-way distances.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the *Amargosa and Palmetto High-Cube Warehouse Traffic Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-6 show the vehicle mixes used for the with Project traffic scenarios.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]				
			Existing	OY 2024		GP 2040	
				Without Project	With Project	Without Project	With Project
1	Key Pointe Dr.	s/o Amargosa Rd.	430	1,000	1,692	4,700	5,392
2	Amargosa Rd.	n/o Palmetto Wy.	8,610	9,130	9,328	13,110	13,308
3	Amargosa Rd.	w/o Key Pointe Dr.	6,530	7,380	7,396	11,280	11,296
4	Amargosa Rd.	e/o Key Pointe Dr.	6,340	6,620	7,328	7,360	8,068
5	Main St.	w/o Key Pointe Dr.	20,470	39,240	39,264	41,730	41,754
6	Main St.	e/o Key Pointe Dr.	11,910	29,510	30,178	27,250	27,918
7	Main St.	e/o I-15 NB Ramps	41,530	46,730	46,967	51,280	51,517

[1] Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis, Ganddini Group, Inc.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits[1]			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

[1] Typical Southern California vehicle mix. Values rounded to the nearest one-hundredth.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-4: WITHOUT PROJECT VEHICLE MIX

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	93.94%	1.74%	4.32%	100.00%

Based on an existing vehicle count taken at US Highway 395 and Phelan Road/Main Street (Hesperia Industrial Center Traffic Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.

Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.

TABLE 6-5: OPENING YEAR (2024) WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Key Pointe Dr.	s/o Amargosa Rd.	89.62%	2.18%	8.20%	100.00%
2	Amargosa Rd.	n/o Palmetto Wy.	94.07%	1.70%	4.23%	100.00%
3	Amargosa Rd.	w/o Key Pointe Dr.	93.95%	1.73%	4.31%	100.00%
4	Amargosa Rd.	e/o Key Pointe Dr.	92.95%	1.84%	5.21%	100.00%
5	Main St.	w/o Key Pointe Dr.	93.94%	1.74%	4.32%	100.00%
6	Main St.	e/o Key Pointe Dr.	93.69%	1.76%	4.54%	100.00%
7	Main St.	e/o I-15 NB Ramps	93.97%	1.73%	4.30%	100.00%

[1] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-6: GENERAL PLAN BUILDOUT (2040) WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Key Pointe Dr.	s/o Amargosa Rd.	92.58%	1.88%	5.54%	100.00%
2	Amargosa Rd.	n/o Palmetto Wy.	94.03%	1.71%	4.26%	100.00%
3	Amargosa Rd.	w/o Key Pointe Dr.	93.95%	1.74%	4.32%	100.00%
4	Amargosa Rd.	e/o Key Pointe Dr.	93.04%	1.83%	5.13%	100.00%
5	Main St.	w/o Key Pointe Dr.	93.94%	1.74%	4.32%	100.00%
6	Main St.	e/o Key Pointe Dr.	93.67%	1.77%	4.56%	100.00%
7	Main St.	e/o I-15 NB Ramps	93.97%	1.73%	4.30%	100.00%

[1] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis* prepared by the Ganddini Group, Inc. (19) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-5 present a summary of the exterior traffic noise levels for each traffic condition. Appendix 7.1 includes the traffic noise level contours worksheets for each traffic condition.

TABLE 7-1: EXISTING WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Non-Sensitive	57.2	RW	RW	RW
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	70.2	52	112	241
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	69.0	RW	93	200
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	68.9	RW	91	197
5	Main St.	w/o Key Pointe Dr.	Sensitive	74.6	122	262	565
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	72.3	85	183	394
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	77.7	195	420	906

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: OPENING YEAR (2024) WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Non-Sensitive	60.9	RW	RW	46
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	70.5	54	116	251
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	69.6	RW	101	217
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.1	RW	94	202
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.4	188	405	872
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.2	155	335	721
7	Main St.	e/o Key Pointe Dr.	Non-Sensitive	78.2	211	455	980

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OPENING YEAR (2024) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Non-Sensitive	65.0	RW	40	86
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	70.5	54	117	252
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	69.6	RW	101	218
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	70.0	50	108	232
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.4	188	405	872
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.4	160	346	745
7	Main St.	e/o Key Pointe Dr.	Non-Sensitive	78.2	211	455	981

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Non-Sensitive	67.6	RW	60	129
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	72.1	69	148	319
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.4	62	134	289
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.6	RW	101	217
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.7	196	422	909
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	75.9	147	317	684
7	Main St.	e/o Key Pointe Dr.	Non-Sensitive	78.6	225	484	1043

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-5: GENERAL PLAN BUILDOUT (2040) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Key Pointe Dr.	s/o Amargosa Rd.	Non-Sensitive	68.9	RW	72	156
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	72.1	69	149	320
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.4	62	134	289
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	70.4	53	114	246
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.7	196	422	909
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.1	153	329	708
7	Main St.	e/o Key Pointe Dr.	Non-Sensitive	78.6	225	485	1044

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.3 OPENING YEAR (2024) TRAFFIC NOISE LEVEL INCREASES

Table 7-2 presents the Opening Year (2024) without Project conditions CNEL noise levels. The Opening Year (2024) without Project exterior noise levels range from 60.9 to 78.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-3 shows that the Opening Year (2024) with Project conditions will range from 65.0 to 78.2 dBA CNEL. Table 7-6 shows that the Project off-site traffic noise level increases range from 0.0 to 4.1 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

7.4 GENERAL PLAN BUILDOUT (2040) TRAFFIC NOISE LEVEL INCREASES

Table 7-4 presents the General Plan Buildout (2040) without Project conditions CNEL noise levels. The General Plan Buildout (2040) without Project exterior noise levels range from 67.6 to 78.6 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-5 shows that the General Plan Buildout (2040) with Project conditions will range from 77.1 to 80.5 dBA CNEL. Table 7-7 shows that the Project off-site traffic noise level increases range from 0.0 to 1.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.

TABLE 7-6: OPENING YEAR (2024) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Key Pointe Dr.	s/o Amargosa Rd.	Non-Sensitive	60.9	65.0	4.1	n/a	No
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	70.5	70.5	0.0	1.5	No
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	69.6	69.6	0.0	1.5	No
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.1	70.0	0.9	n/a	No
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.4	77.4	0.0	1.5	No
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	76.2	76.4	0.2	3.0	No
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	78.2	78.2	0.0	3.0	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?
n/a" Per the City of Hesperia General Plan Noise Element Exhibit NS-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria

TABLE 7-7: GENERAL PLAN BUILDOUT (2040) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use[1]	CNEL at Receiving Land Use (dBA)[1]			Incremental Noise Level Increase Threshold[2]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Key Pointe Dr.	s/o Amargosa Rd.	Non-Sensitive	67.6	68.9	1.3	n/a	No
2	Amargosa Rd.	n/o Palmetto Wy.	Sensitive	72.1	72.1	0.0	1.5	No
3	Amargosa Rd.	w/o Key Pointe Dr.	Sensitive	71.4	71.4	0.0	1.5	No
4	Amargosa Rd.	e/o Key Pointe Dr.	Non-Sensitive	69.6	70.4	0.8	n/a	No
5	Main St.	w/o Key Pointe Dr.	Sensitive	77.7	77.7	0.0	1.5	No
6	Main St.	e/o Key Pointe Dr.	Non-Sensitive	75.9	76.1	0.2	3.0	No
7	Main St.	e/o I-15 NB Ramps	Non-Sensitive	78.6	78.6	0.0	3.0	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

n/a" Per the City of Hesperia General Plan Noise Element Exhibit NS-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria

8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, five receiver locations in the vicinity of the Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

R1: Location R1 represents the existing noise sensitive residence at 13030 Avenal Street, approximately 71 feet north of the Project site. Receiver R1 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

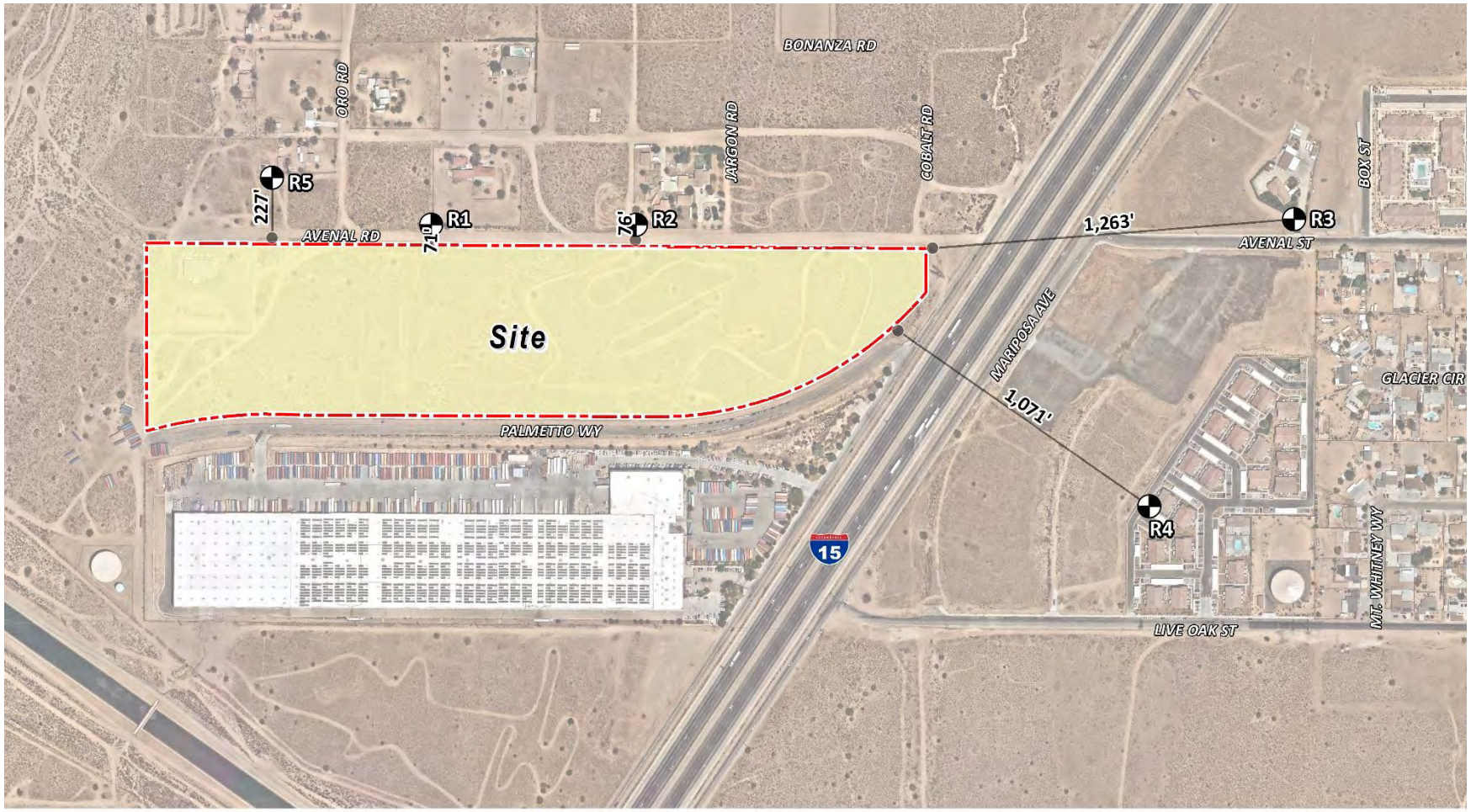
R2: Location R2 represents the existing noise sensitive residence at 13164 Avenal Road, approximately 76 feet north of the Project site. Receiver R2 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing noise sensitive residence at 10445 Avenal Street, approximately 1,263 feet east of the Project site. Receiver R3 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the existing noise sensitive residence at 10122 Mt. Whitney Way, approximately 1,071 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the residential building façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.

R5: Location R5 represents the existing noise sensitive residence at 10376 Wellington Road, approximately 227 feet north of the Project site Receiver R5 is placed at the private outdoor living areas (backyards) facing the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

EXHIBIT 8-A: RECEIVER LOCATIONS



9 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 8, resulting from the operation of the proposed Amargosa and Palmetto High-Cube Warehouse Project. Exhibit 9-A identifies the noise source locations used to assess the operational noise levels.

9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. Consistent with similar warehouse and industrial uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements.

9.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements all operating at the same time. These sources of noise activity will likely vary throughout the day.

9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (15)

EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS

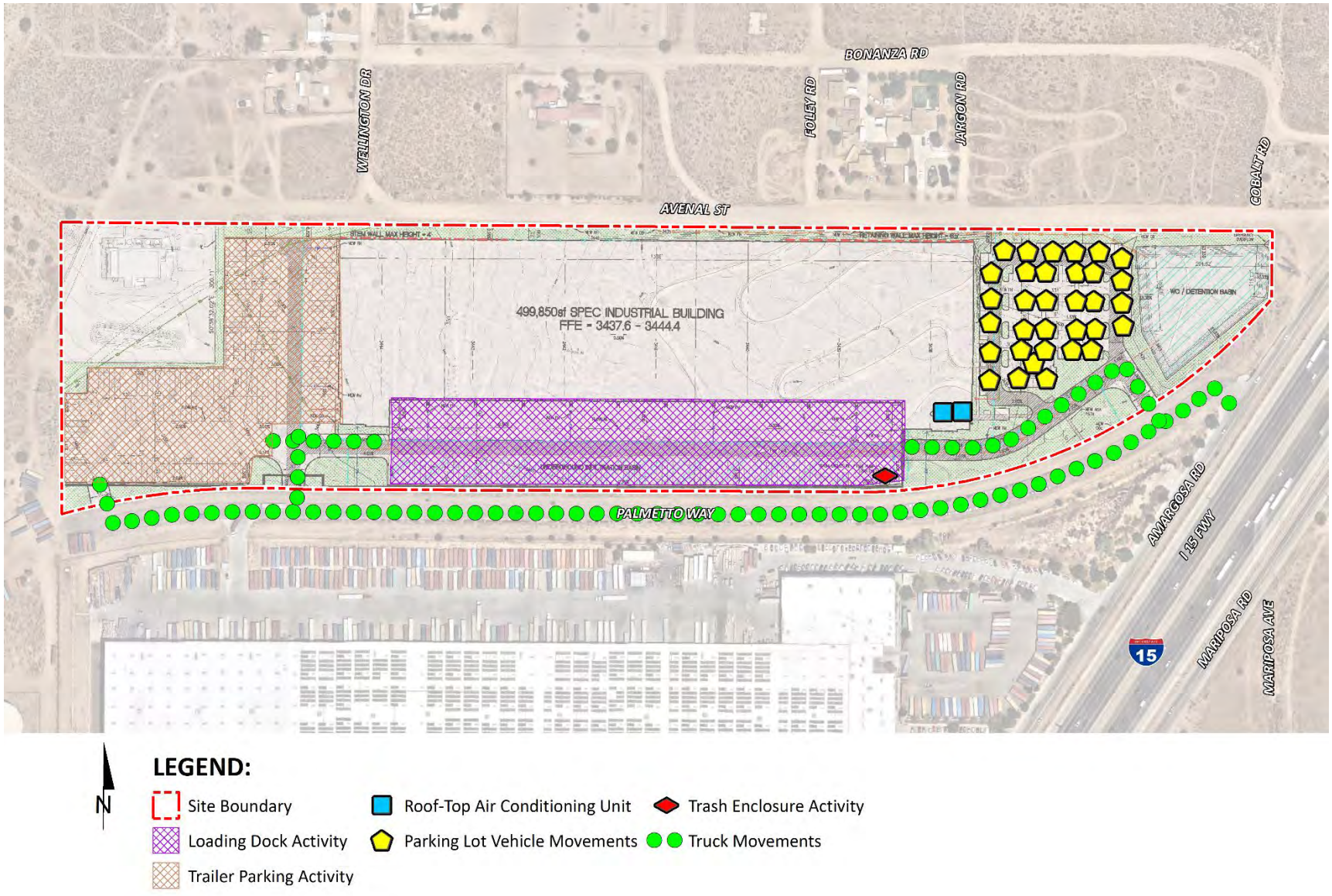


TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source[1]	Noise Source Height (Feet)	Min./ Hour[2]		Reference Noise Level (dBA L_{eq}) @ 50 Feet	Sound Power Level (dBA)[3]
		Day	Night		
Loading Dock Activity	8'	60	60	65.7	111.5
Trailer Parking Activity	8'	60	60	62.8	103.4
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	10	10	57.3	89.0
Parking Lot Vehicle Movements	5'	60	60	52.6	81.1
Truck Movements	8'	60	60	59.8	93.2

[1] As measured by Urban Crossroads, Inc.
[2] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

9.2.2 LOADING DOCK ACTIVITY

The reference loading dock activities are intended to describe the typical outdoor operational noise activities associated with the Project. This includes truck idling, reefer activity (refrigerator truck/cold storage), deliveries, backup alarms, trailer docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background operation activities. Since the noise levels generated by cold storage loading dock activity can be slightly higher due to the use of refrigerated trucks or reefers.

The reference noise level measurement was taken in the center of the loading dock activity area and represents multiple concurrent noise sources resulting in a combined noise level of 65.7 dBA L_{eq} at a uniform distance of 50 feet. Specifically, the reference noise level measurement represents one truck located approximately 30 feet from the noise level meter with another truck passing by to park roughly 20 feet away, both with their engines idling. Throughout the reference noise level measurement, a separate docked and running reefer truck was located approximately 50 feet east of the measurement location. Additional background noise sources included truck pass-by noise, truck drivers talking to each other next to docked trucks, and air brake release noise when trucks parked.

9.2.3 TRAILER PARKING ACTIVITY

To evaluate the noise levels associated with truck idling, backup alarms, trailer movements and storage activities, Urban Crossroads collected a reference noise level measurement at an existing parcel hub facility to describe the potential operational noise levels associated with Project operational activities. The measured reference noise level at 50 feet from activity was measured at 62.8 dBA L_{eq}.

The reference noise level measurement includes a semi-truck with trailer pass-by event, background switcher cab trailer towing, drop-off, idling, and backup alarm events. Noise associated with trailer storage activity is expected to operate for the entire hour (60 minutes).

9.2.4 ROOF-TOP AIR CONDITIONING UNITS

The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA L_{eq}. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project building.

9.2.5 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building. Typical trash enclosure activities are estimated to occur for 10 minutes per hour.

9.2.6 PARKING LOT VEHICLE MOVEMENTS

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of an Amazon warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA L_{eq}. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due cars pulling in and out of parking spaces in combination with car doors opening and closing.

9.2.7 TRUCK MOVEMENTS

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represents multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA L_{eq} at 50 feet. The noise sources included at this measurement location account for trucks entering and existing the Project driveways and maneuvering in and out of the outdoor loading dock activity area.

9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

9.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, trailer parking activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, and truck movements, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 9-2 shows the Project operational noise levels during the daytime hours of 7:00 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 37.6 to 47.7 dBA L_{eq}.

TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)				
	R1	R2	R3	R4	R5
Loading Dock Activity	30.9	30.6	35.1	42.8	29.2
Trailer Parking Activity	45.7	40.1	30.4	31.4	47.3
Roof-Top Air Conditioning Units	17.9	19.9	21.1	23.3	19.7
Trash Enclosure Activity	0.0	0.0	11.3	14.1	0.0
Parking Lot Vehicle Movements	19.9	32.0	27.6	29.5	19.4
Truck Movements	17.9	17.4	28.3	31.8	36.6
Total (All Noise Sources)	**45.9**	**41.2**	**37.6**	**43.6**	**47.7**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

Table 9-3 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 37.5 to 47.7 dBA L_{eq}. The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1 and Appendix 9.1.

TABLE 9-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA Leq)				
	R1	R2	R3	R4	R5
Loading Dock Activity	30.9	30.6	35.1	42.8	29.2
Trailer Parking Activity	45.7	40.1	30.4	31.4	47.3
Roof-Top Air Conditioning Units	15.5	17.5	18.7	20.9	17.3
Trash Enclosure Activity	0.0	0.0	10.4	13.1	0.0
Parking Lot Vehicle Movements	19.9	32.0	27.6	29.5	19.4
Truck Movements	17.9	17.4	28.3	31.8	36.6
Total (All Noise Sources)	**45.9**	**41.2**	**37.5**	**43.6**	**47.7**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

9.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Hesperia exterior noise level standards at nearby noise-sensitive receiver locations. Table 9-4 shows the operational noise levels associated with Amargosa and Palmetto High-Cube Warehouse Project will satisfy the City of Hesperia exterior noise level standards adjusted to reflect the ambient noise conditions.

TABLE 9-4: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]		Noise Level Standards (dBA Leq)[3]		Noise Level Standards Exceeded?[4]	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	45.9	45.9	60	55	No	No
R2	41.2	41.2	60	55	No	No
R3	37.6	37.5	60	55	No	No
R4	43.6	43.6	60	55	No	No
R5	47.7	47.7	60	55	No	No

[1] See Exhibit 8-A for the receiver locations.
[2] Proposed Project operational noise levels as shown on Tables 9-2 and 9-3.
[3] Exterior noise level standards, for residential land use, as shown on Table 3-1.
[4] Do the estimated Project operational noise source activities exceed the noise level standards?
"Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

9.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \ldots 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. As indicated on Tables 9-5, the Project will generate a daytime operational noise level increases ranging from 0.0 to 1.3 dBA L_{eq} at the nearest receiver locations. Table 9-6 shows that the Project will generate a nighttime operational noise level increases ranging from 0.0 to 1.5 dBA L_{eq} at the nearest receiver locations. Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented on Table 4-1. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.

TABLE 9-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	45.9	L1	61.0	61.1	0.1	5.0	No
R2	41.2	L2	55.6	55.8	0.2	5.0	No
R3	37.6	L3	58.6	58.6	0.0	5.0	No
R4	43.6	L4	62.7	62.8	0.1	5.0	No
R5	47.7	L5	52.3	53.6	1.3	5.0	No

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project daytime operational noise levels as shown on Table 9-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

TABLE 9-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Increase Criteria[7]	Increase Criteria Exceeded?
R1	37.9	L1	65.7	65.7	0.0	1.5	No
R2	36.1	L2	55.2	55.3	0.1	5.0	No
R3	39.9	L3	43.2	44.9	1.7	5.0	No
R4	45.5	L4	45.8	48.7	2.9	5.0	No
R5	42.4	L5	50.8	51.4	0.6	5.0	No

[1] See Exhibit 8-A for the receiver locations.
[2] Total Project nighttime operational noise levels as shown on Table 9-4.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance increase criteria as shown on Table 4-1.

10 CONSTRUCTION ANALYSIS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries in relation to the nearest sensitive receiver locations previously described in Section 8. According to Section 16.20.125.E.3 of the Municipal Code states that construction activities are limited to the hours of 7:00 a.m. to 7:00 p.m. on any day and at any time on Sundays and federal holidays.

In addition, since neither the City of Hesperia General Plan or County Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA L_{eq} as a reasonable threshold for noise sensitive residential land use. (8 p. 179).

10.1 CONSTRUCTION NOISE LEVELS

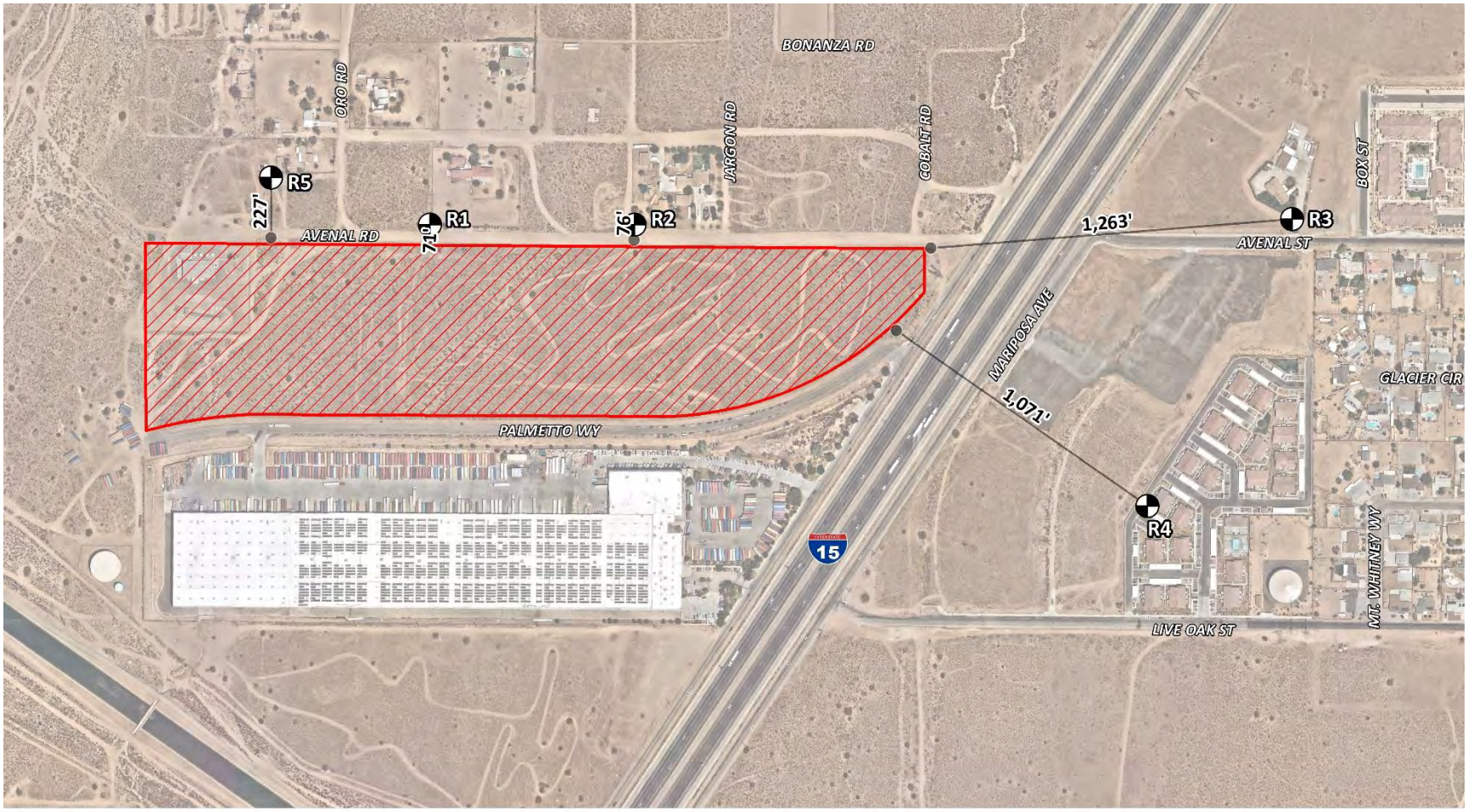
The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (20) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE LOCATIONS



10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 10-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 10-2, the construction noise levels are expected to range from 39.1 to 59.7 dBA L_{eq} at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA L_{eq})[1]	Combined Noise Level (dBA L_{eq})[2]	Combined Sound Power Level (PWL)[3]
Site Preparation	Crawler Tractors	78	80	112
	Hauling Trucks	72		
	Rubber Tired Dozers	75		
Grading	Graders	81	83	115
	Excavators	77		
	Compactors	76		
Building Construction	Cranes	73	81	113
	Tractors	80		
	Welders	70		
Paving	Pavers	74	83	115
	Paving Equipment	82		
	Rollers	73		
Architectural Coating	Cranes	73	77	109
	Air Compressors	74		
	Generator Sets	70		

[1] FHWA Roadway Construction Noise Model (RCNM).
[2] Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	56.7	59.7	57.7	59.7	53.7	59.7
R2	56.5	59.5	57.5	59.5	53.5	59.5
R3	42.1	45.1	43.1	45.1	39.1	45.1
R4	44.1	47.1	45.1	47.1	41.1	47.1
R5	52.9	55.9	53.9	55.9	49.9	55.9

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	59.7	80	No
R2	59.5	80	No
R3	45.1	80	No
R4	47.1	80	No
R5	55.9	80	No

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 10-2.
[3] Construction noise level thresholds as shown on Table 4-1.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.5 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

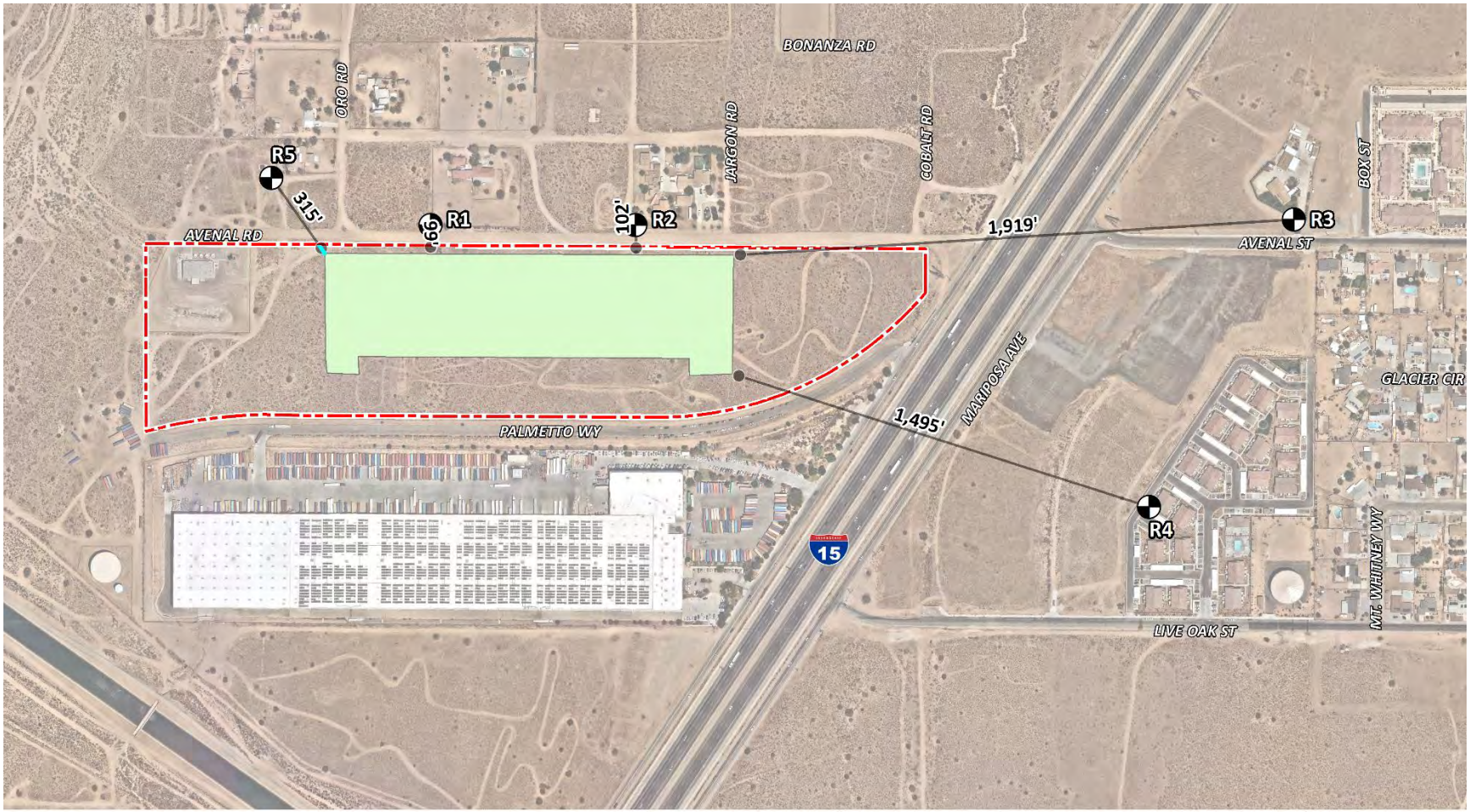
It is our understanding that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area as shown on Exhibit 10-B. Since the nighttime concrete pours will take place outside the permitted City of Hesperia Municipal Code, Section 16.20.125.E.3 hours of *7:00 a.m. to 7:00 p.m. on any day and at any time on Sundays and federal holidays*. The Project Applicant will be required to obtain authorization for nighttime work from the City of Hesperia. Any nighttime construction noise activities shall satisfy the noise limits outlined in Table 3-1.

10.5.1 NIGHTTIME CONCRETE POUR REFERENCE NOISE LEVEL MEASUREMENTS

To estimate the noise levels due to nighttime concrete pour activities, sample reference noise level measurements were taken during a nighttime concrete pour at a construction site. Urban Crossroads, Inc. collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. at 27334 San Bernardino Avenue in the City of Redlands. The reference noise levels describe the expected concrete pour noise sources that may include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling.

To describe the nighttime concrete pour noise levels associated with the construction of the Amargosa and Palmetto High-Cube Warehouse, this analysis relies on reference sound power level of 100.3 dBA L_w. While the Project noise levels will depend on the actual duration of activities and specific equipment fleet in use at the time of construction, the reference sound power level of 100.3 dBA L_w is used to describe the expected Project nighttime concrete pour noise activities.

EXHIBIT 10-B: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS



10.5.2 NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

As shown on Table 10-4, the noise levels associated with the nighttime concrete pour activities are estimated to range from 29.9 to 47.3 dBA L_{eq} and will satisfy the City of Hesperia nighttime stationary-source exterior hourly average L_{eq} residential noise level threshold at all the receiver locations. Based on the results of this analysis, all nearest noise receiver locations will experience *less than significant* impacts due to the Project related nighttime concrete pour activities. Appendix 10.2 includes the CadnaA nighttime concrete pour noise model inputs.

TABLE 10-4: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

Receiver Location[1]	Use	Construction Noise Levels (dBA L_{eq})		
		Paving Construction[2]	Nighttime Threshold[3]	Threshold Exceeded?[4]
R1	Residence	47.3	55	No
R2	Residence	47.2	55	No
R3	Residence	29.9	55	No
R4	Residence	31.7	55	No
R5	Residence	40.3	55	No

[1] Noise receiver locations are shown on Exhibit 10-B.
[2] Paving construction noise level calculations based on distance from the construction noise source activity to nearby receiver locations.
[3] Exterior nighttime noise level standards as shown on Table 3-1.
[4] Do the estimated Project construction noise levels exceed the nighttime construction noise level threshold?

10.6 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 10-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 10-6 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 71 to 1,263 feet from Project construction activities, construction vibration velocity levels range from 0.000 to 0.0.19 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.2 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise sensitive receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

Moreover, the vibration levels reported at the sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

TABLE 10-6: PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]					Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level		
R1	71'	0.001	0.007	0.016	0.019	0.019	0.2	No
R2	76'	0.001	0.007	0.014	0.017	0.017	0.2	No
R3	1,263'	0.000	0.000	0.000	0.000	0.000	0.2	No
R4	1,071'	0.000	0.000	0.000	0.000	0.000	0.2	No
R5	227'	0.000	0.001	0.003	0.003	0.003	0.2	No

[1] Receiver locations are shown on Exhibit 8-A.
[2] Distance from receiver location to Project construction boundary (Project site boundary).
[3] Based on the Vibration Source Levels of Construction Equipment (Table 8-4).
[4] City of Hesperia Municipal Code, Section 16.20.130 (Appendix 3.1)
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

11 REFERENCES

1. **State of California.** *California Environmental Quality Act, Environmental Checklist Form Appendix G.* 2021.
2. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
4. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
5. **U.S. Department of Transportation Federal Highway Administration.** *Highway Noise Barrier Design Handbook.* 2001.
6. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
8. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
9. **Office of Planning and Research.** *State of California General Plan Guidlines.* October 2019.
10. **City of Hesperia.** *General Plan Noise Element.* 2010.
11. —. *Municipal Code, Section 16.20.*
12. **California Court of Appeal.** *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; - Cal.Rptr.3d, October 2008.
13. **Federal Interagency Committee on Noise.** *Federal Agency Review of Selected Airport Noise Analysis Issues.* August 1992.
14. **California Department of Transportation.** *Technical Noise Supplement.* November 2009.
15. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
16. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
17. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
18. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
19. **Ganddini Group, Inc.** *Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis.* August 2022.
20. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.

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12 CERTIFICATIONS

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Amargosa and Palmetto High-Cube Warehouse Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 584-3148.

Bill Lawson, P.E., INCE
Principal
URBAN CROSSROADS, INC.
1133 Camelback #8329
Newport Beach, CA 92658
(949) 581-3148
blawson@urbanxroads.com



EDUCATION

Master of Science in Civil and Environmental Engineering
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning
California Polytechnic State University, San Luis Obispo • June, 1992

PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
ITE – Institute of Transportation Engineers

PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of San Diego • March, 2018
Certified Acoustical Consultant – County of Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 3.1:

CITY OF HESPERIA MUNICIPAL CODE

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16.20.125 - Noise.

A. Noise Measurement. Noise will be measured with a sound level meter, which meets the standards of the American National Standards Institute (ANSI Section S1.4-1979, Type 1 or Type 2). Noise levels shall be measured using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 micro-newtons per meter squared). The unit of measure shall be designated as dB(A). The building official shall be the noise control officer.

B. Noise Standards.

1. The following table describes the noise standard for emanations from any source, as it affects adjacent properties:

NOISE STANDARDS

Affected Land Use (Receiving Noise)	Maximum Noise Level	Time Period
A-1, A-2, R-1, R-3 and RR Zone Districts	55 dB(A)	10:00 p.m. - 7:00 a.m.
A-1, A-2, R-1, R-3 and RR Zone Districts	60 dB(A)*	7:00 a.m. - 10:00 p.m.
C-1, C-2, C-3, C-4, C-R, AP, and P-I Zone Districts	65 dB(A)*	Anytime
I-1 and I-2 Zone Districts	70 dB(A)*	Anytime

* Due to wind noise, the maximum permissible noise level may be adjusted so that it is no greater than five dB(A) above the ambient noise level.

2. No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:
   a. The noise standard for that receiving land use (as specified in subsection (B)(1) of this section) for a cumulative period of more than thirty (30) minutes in any hour; or
   b. The noise standard plus five dB(A) for a cumulative period of more than fifteen (15) minutes in any hour; or
   c. The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour; or
   d. The noise standard plus fifteen (15) dB(A) for a cumulative period of more than one minute in any hour; or
   e. The noise standard plus twenty (20) dB(A) for any period of time.

C. If the measured ambient level exceeds any of the first four noise limit categories above, the allowable noise

exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

D. If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in subsection (B)(1) of this section shall be reduced by five dB(A).

E. Exempt Noises. The following sources of noise are exempt:

1. Motor vehicles not under the control of the industrial use;
2. Emergency equipment, vehicles and devices;
3. Temporary construction, repair, or demolition activities between seven a.m. and seven p.m. except Sundays and federal holidays.

(Ord. 2002-07 Exh. A, 2002; Amended during 1997 codification; Ord. 75 § 2 (part), 1990; SBCC § 87.1305)

16.20.130 - Vibration.

A. Vibration Standard. No ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the lot line; nor will any vibration be permitted which produces a particle velocity greater than or equal to 0.2 inches per second measured at or beyond the lot line.

B. Vibration Measurement. Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity or acceleration. Readings are to be made at points of maximum vibration along any lot line next to a residential or commercial district or a community industrial lot.

C. Exempt Vibrations. The following sources of vibration are not regulated by this code:

1. Motor vehicles not under the control of the industrial use;
2. Temporary construction, maintenance or demolition activities between seven a.m. and seven p.m. except Sundays and federal holidays.

(SBCC § 87.1310)

APPENDIX 5.1:

STUDY AREA PHOTOS

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14848_L1_G_1.North
34, 26' 15.580000"117, 22' 42.770000"



14848_L1_G_2.South
34, 26' 15.160000"117, 22' 42.740000"



14848_L1_G_3.East
34, 26' 15.160000"117, 22' 42.710000"



14848_L1_G_4.West
34, 26' 15.190000"117, 22' 42.880000"



14848_L2_S_1.North
34, 26' 14.640000"117, 22' 34.720000"



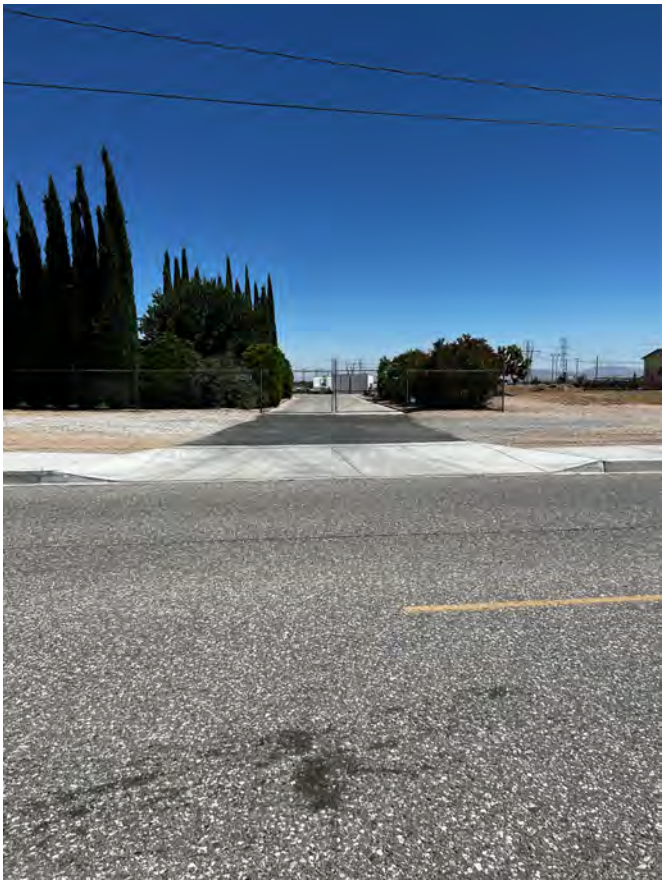
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34, 26' 14.640000"117, 22' 34.780000"



14848_L2_S_3.East
34, 26' 14.670000"117, 22' 34.780000"



14848_L2_S_4.West
34, 26' 14.700000"117, 22' 34.780000"



14848_L3_Z_1.North
34, 26' 15.340000"117, 22' 7.860000"



14848_L3_Z_2.South
34, 26' 15.300000"117, 22' 7.970000"



14848_L3_Z_3.East
34, 26' 15.330000"117, 22' 7.940000"



14848_L3_Z_4.West
34, 26' 15.330000"117, 22' 7.970000"



14848_L4_W_1.North
34, 26' 3.110000"117, 22' 14.920000"



14848_L4_W_2.South
34, 26' 2.740000"117, 22' 15.010000"



14848_L4_W_3.East
34, 26' 2.750000"117, 22' 14.890000"



14848_L4_W_4.West
34, 26' 2.820000"117, 22' 14.890000"



14848_L5_A_1.North
34, 26' 16.520000"117, 22' 49.640000"



14848_L5_A_2.South
34, 26' 16.520000"117, 22' 49.670000"



14848_L5_A_3.East
34, 26' 16.520000"117, 22' 49.640000"



14848_L5_A_4.West
34, 26' 16.520000"117, 22' 49.670000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

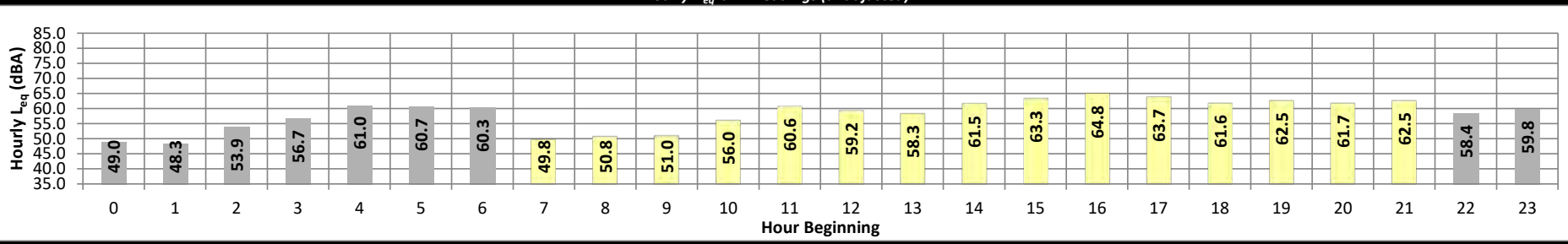
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24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L1 - Located north of the Project Site near the existing noise *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* sensitive residence at 13030 Avenal Street. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	49.0	54.1	46.1	53.8	53.3	52.0	51.3	49.4	48.4	46.9	46.6	46.2	49.0	10.0	59.0
	1	48.3	51.2	45.5	51.0	50.8	50.3	50.0	49.0	48.1	46.5	46.1	45.6	48.3	10.0	58.3
	2	53.9	57.0	51.2	56.8	56.5	56.0	55.7	54.6	53.6	52.1	51.8	51.4	53.9	10.0	63.9
	3	56.7	59.1	54.7	58.9	58.7	58.2	58.0	57.3	56.6	55.4	55.1	54.8	56.7	10.0	66.7
	4	61.0	64.3	58.7	64.0	63.7	63.1	62.8	61.6	60.8	59.4	59.2	58.8	61.0	10.0	71.0
	5	60.7	63.4	58.8	63.1	62.8	62.3	62.0	61.1	60.5	59.3	59.1	58.9	60.7	10.0	70.7
	6	60.3	66.6	58.0	65.4	64.7	63.2	62.2	60.4	59.6	58.5	58.3	58.1	60.3	10.0	70.3
Day	7	49.8	55.0	47.0	54.4	54.0	52.8	52.1	50.3	49.1	47.6	47.4	47.1	49.8	0.0	49.8
	8	50.8	58.6	46.4	58.1	57.5	55.4	53.8	51.1	49.3	47.2	46.9	46.6	50.8	0.0	50.8
	9	51.0	58.7	46.4	58.4	58.0	56.8	55.7	50.6	48.6	47.0	46.8	46.5	51.0	0.0	51.0
	10	56.0	62.2	50.8	61.8	61.5	60.4	59.6	56.8	54.6	51.9	51.5	51.0	56.0	0.0	56.0
	11	60.6	67.2	53.5	66.7	66.3	65.1	64.4	61.5	59.1	55.3	54.6	53.8	60.6	0.0	60.6
	12	59.2	65.3	52.8	64.9	64.5	63.5	62.8	60.2	57.8	54.3	53.7	53.1	59.2	0.0	59.2
	13	58.3	64.9	51.9	64.5	64.0	62.9	62.1	59.3	56.4	53.3	52.8	52.2	58.3	0.0	58.3
	14	61.5	68.5	54.0	68.0	67.6	66.5	65.7	62.4	59.7	55.8	55.0	54.3	61.5	0.0	61.5
	15	63.3	70.2	55.5	69.9	69.5	68.3	67.5	64.3	61.2	57.2	56.5	55.7	63.3	0.0	63.3
	16	64.8	71.6	56.7	71.1	70.7	69.5	68.7	65.9	63.2	58.8	57.9	57.0	64.8	0.0	64.8
	17	63.7	70.3	56.7	69.9	69.6	68.5	67.5	64.5	62.1	58.5	57.7	57.0	63.7	0.0	63.7
	18	61.6	67.3	55.5	66.9	66.5	65.6	64.8	62.6	60.6	57.2	56.6	55.7	61.6	0.0	61.6
	19	62.5	68.7	55.7	68.2	67.8	66.8	66.1	63.6	61.3	57.5	56.8	56.0	62.5	5.0	67.5
	20	61.7	68.0	55.2	67.6	67.1	66.0	65.1	62.6	60.4	57.0	56.3	55.5	61.7	5.0	66.7
	21	62.5	69.1	55.8	68.7	68.2	67.0	66.0	63.6	61.2	57.4	56.8	56.1	62.5	5.0	67.5
Night	22	58.4	63.9	53.6	63.5	63.2	62.2	61.5	59.3	57.4	54.8	54.3	53.7	58.4	10.0	68.4
	23	59.8	66.5	53.6	66.0	65.5	64.3	63.3	60.6	58.4	55.3	54.6	53.9	59.8	10.0	69.8

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	49.8	55.0	46.4	54.4	54.0	52.8	52.1	50.3	48.6	47.0	46.8	46.5
	Max	64.8	71.6	56.7	71.1	70.7	69.5	68.7	65.9	63.2	58.8	57.9	57.0
Energy Average		61.0	Average:		65.3	64.8	63.7	62.8	60.0	57.6	54.4	53.8	53.2
Night	Min	48.3	51.2	45.5	51.0	50.8	50.3	50.0	49.0	48.1	46.5	46.1	45.6
	Max	61.0	66.6	58.8	66.0	65.5	64.3	63.3	61.6	60.8	59.4	59.2	58.9
Energy Average		58.2	Average:		60.3	59.9	59.1	58.5	57.0	55.9	54.3	53.9	53.5

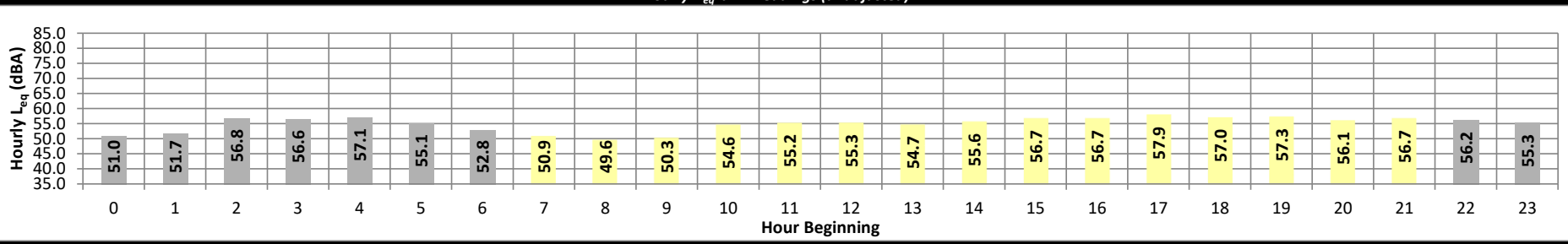
L_{eq} (dBA)		
24-Hour	Daytime (7am-10pm)	Nighttime (10pm-7am)
60.1	**61.0**	**58.2**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L2 - Located south of the existing noise sensitive residence at *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* 13164 Avenal Road with the Project Site. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	51.0	55.0	48.2	54.7	54.2	53.3	52.9	51.7	50.5	49.0	48.6	48.3	51.0	10.0	61.0
	1	51.7	55.1	48.3	54.9	54.6	54.1	53.7	52.5	51.3	49.3	48.9	48.4	51.7	10.0	61.7
	2	56.8	60.2	53.4	60.0	59.7	59.2	58.9	57.6	56.5	54.6	54.1	53.5	56.8	10.0	66.8
	3	56.6	58.9	54.3	58.8	58.6	58.3	58.1	57.2	56.4	55.0	54.7	54.4	56.6	10.0	66.6
	4	57.1	60.0	54.8	59.7	59.5	59.0	58.7	57.7	56.8	55.5	55.3	54.9	57.1	10.0	67.1
	5	55.1	58.0	53.1	57.8	57.6	57.1	56.8	55.6	54.8	53.6	53.4	53.2	55.1	10.0	65.1
	6	52.8	56.5	50.3	56.0	55.7	55.2	54.7	53.5	52.4	50.9	50.7	50.3	52.8	10.0	62.8
Day	7	50.9	54.6	48.5	54.3	54.1	53.5	53.1	51.5	50.4	49.1	48.8	48.6	50.9	0.0	50.9
	8	49.6	54.7	47.1	54.4	53.9	52.6	51.7	50.0	49.1	47.7	47.4	47.2	49.6	0.0	49.6
	9	50.3	55.5	47.1	55.2	54.9	54.0	53.4	50.8	49.2	47.6	47.4	47.2	50.3	0.0	50.3
	10	54.6	59.9	51.6	59.5	59.1	57.8	56.8	54.9	53.9	52.4	52.1	51.7	54.6	0.0	54.6
	11	55.2	59.6	52.1	59.1	58.6	57.9	57.4	55.8	54.7	53.0	52.6	52.2	55.2	0.0	55.2
	12	55.3	58.9	52.5	58.5	58.1	57.5	57.1	56.0	54.9	53.4	53.0	52.6	55.3	0.0	55.3
	13	54.7	58.7	51.9	58.3	58.0	57.2	56.7	55.3	54.2	52.7	52.4	52.1	54.7	0.0	54.7
	14	55.6	60.4	52.7	60.0	59.6	58.4	57.8	56.2	55.1	53.5	53.1	52.8	55.6	0.0	55.6
	15	56.7	60.7	53.8	60.4	60.1	59.3	58.9	57.3	56.3	54.7	54.4	54.0	56.7	0.0	56.7
	16	56.7	61.4	53.8	60.9	60.3	59.2	58.6	57.3	56.3	54.6	54.3	53.9	56.7	0.0	56.7
	17	57.9	63.3	54.3	63.0	62.7	61.9	61.2	58.0	56.8	55.2	54.9	54.5	57.9	0.0	57.9
	18	57.0	60.9	53.9	60.5	60.0	59.4	59.0	57.8	56.6	54.8	54.5	54.1	57.0	0.0	57.0
	19	57.3	62.0	54.1	61.6	61.1	60.0	59.4	57.8	56.7	55.1	54.7	54.3	57.3	5.0	62.3
	20	56.1	60.8	53.3	60.3	59.9	59.0	58.4	56.5	55.5	54.0	53.7	53.4	56.1	5.0	61.1
	21	56.7	60.7	53.8	60.4	60.0	59.1	58.5	57.4	56.4	54.7	54.4	53.9	56.7	5.0	61.7
Night	22	56.2	61.0	53.0	60.6	60.1	58.9	58.4	57.0	55.7	53.9	53.5	53.1	56.2	10.0	66.2
	23	55.3	59.4	51.8	59.0	58.5	57.9	57.5	56.1	54.8	52.9	52.5	52.0	55.3	10.0	65.3

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	49.6	54.6	47.1	54.3	53.9	52.6	51.7	50.0	49.1	47.6	47.4	47.2
	Max	57.9	63.3	54.3	63.0	62.7	61.9	61.2	58.0	56.8	55.2	54.9	54.5
Energy Average		55.6	Average:		59.1	58.7	57.8	57.2	55.5	54.4	52.8	52.5	52.2
Night	Min	51.0	55.0	48.2	54.7	54.2	53.3	52.9	51.7	50.5	49.0	48.6	48.3
	Max	57.1	61.0	54.8	60.6	60.1	59.2	58.9	57.7	56.8	55.5	55.3	54.9
Energy Average		55.2	Average:		57.9	57.6	57.0	56.6	55.4	54.4	52.7	52.4	52.0

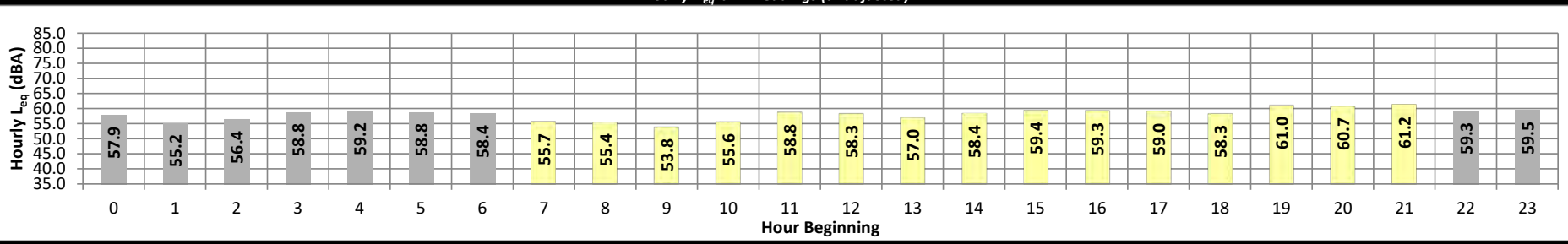
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
55.4	**55.6**	**55.2**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L3 - Located east of the Project site near the existing noise *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* sensitive residence at 10445 Avenal Street. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	57.9	63.7	54.1	63.2	62.5	61.1	60.3	58.5	57.1	55.1	54.7	54.2	57.9	10.0	67.9
	1	55.2	60.7	51.4	60.4	60.0	58.5	57.7	55.8	54.4	52.3	51.9	51.5	55.2	10.0	65.2
	2	56.4	62.5	52.7	62.2	61.7	60.2	59.0	56.9	55.5	53.6	53.3	52.8	56.4	10.0	66.4
	3	58.8	62.7	55.1	62.5	62.2	61.5	60.9	59.6	58.4	56.1	55.7	55.2	58.8	10.0	68.8
	4	59.2	64.5	55.6	64.4	64.0	62.9	61.8	59.6	58.5	56.5	56.1	55.7	59.2	10.0	69.2
	5	58.8	66.5	55.3	66.1	65.4	63.2	61.6	58.5	57.5	56.0	55.7	55.4	58.8	10.0	68.8
	6	58.4	65.8	54.6	65.4	64.8	62.6	61.4	58.5	57.2	55.3	55.0	54.7	58.4	10.0	68.4
Day	7	55.7	64.3	51.1	64.0	63.3	60.9	59.0	55.5	53.7	51.8	51.5	51.2	55.7	0.0	55.7
	8	55.4	65.4	49.2	65.1	64.6	62.3	59.8	54.0	51.9	50.0	49.7	49.3	55.4	0.0	55.4
	9	53.8	64.6	48.2	64.1	63.1	60.0	57.3	52.1	50.7	49.0	48.7	48.3	53.8	0.0	53.8
	10	55.6	65.9	48.6	65.4	64.6	62.2	60.1	54.3	51.8	49.5	49.1	48.7	55.6	0.0	55.6
	11	58.8	68.1	50.0	67.7	67.2	65.5	63.6	58.4	55.5	51.5	50.9	50.3	58.8	0.0	58.8
	12	58.3	68.1	49.8	67.5	66.6	64.1	62.3	58.5	55.3	51.2	50.6	50.0	58.3	0.0	58.3
	13	57.0	67.2	49.2	66.8	66.0	63.8	61.7	56.2	53.2	50.2	49.8	49.3	57.0	0.0	57.0
	14	58.4	68.2	50.8	67.6	66.7	64.1	62.9	58.0	55.5	52.6	51.9	51.0	58.4	0.0	58.4
	15	59.4	67.7	51.3	67.2	66.6	64.8	63.4	60.0	57.1	53.1	52.4	51.5	59.4	0.0	59.4
	16	59.3	67.6	52.1	67.2	66.6	64.8	63.4	59.6	56.9	53.4	52.9	52.3	59.3	0.0	59.3
	17	59.0	67.4	52.7	66.9	66.2	64.1	63.0	59.2	56.9	54.0	53.4	52.9	59.0	0.0	59.0
	18	58.3	66.1	53.4	65.6	64.9	62.7	61.5	58.6	56.6	54.4	54.0	53.6	58.3	0.0	58.3
	19	61.0	67.9	56.7	67.3	66.7	64.9	63.7	61.4	59.9	57.8	57.3	56.9	61.0	5.0	66.0
	20	60.7	67.3	56.6	66.8	66.2	64.5	63.4	61.2	59.7	57.7	57.3	56.8	60.7	5.0	65.7
	21	61.2	67.3	57.4	66.8	66.3	64.5	63.7	61.8	60.4	58.5	58.1	57.6	61.2	5.0	66.2
Night	22	59.3	66.8	55.1	66.3	65.7	63.4	62.0	59.4	58.0	56.1	55.7	55.3	59.3	10.0	69.3
	23	59.5	67.5	54.6	67.1	66.5	64.4	62.9	59.4	57.9	55.8	55.3	54.8	59.5	10.0	69.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	53.8	64.3	48.2	64.0	63.1	60.0	57.3	52.1	50.7	49.0	48.7	48.3
	Max	61.2	68.2	57.4	67.7	67.2	65.5	63.7	61.8	60.4	58.5	58.1	57.6
Energy Average		58.6	Average:		66.4	65.7	63.5	61.9	57.9	55.7	53.0	52.5	52.0
Night	Min	55.2	60.7	51.4	60.4	60.0	58.5	57.7	55.8	54.4	52.3	51.9	51.5
	Max	59.5	67.5	55.6	67.1	66.5	64.4	62.9	59.6	58.5	56.5	56.1	55.7
Energy Average		58.4	Average:		64.2	63.7	62.0	60.8	58.5	57.2	55.2	54.8	54.4

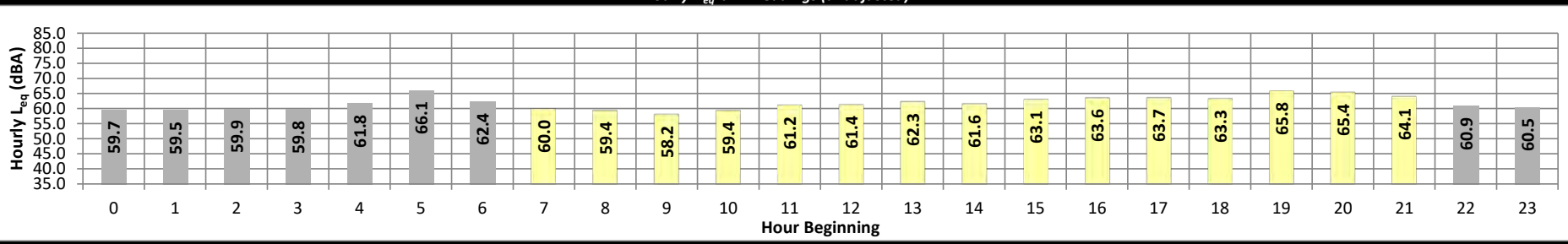
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
58.5	**58.6**	**58.4**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L4 - Located southeast of the Project site near the existing *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* noise sensitive residence at 10122 Mt. Whitney Way. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	59.7	67.3	55.7	67.0	66.4	64.6	63.2	59.5	57.9	56.4	56.1	55.8	59.7	10.0	69.7
	1	59.5	66.9	55.5	66.5	66.0	64.0	62.1	59.6	58.3	56.5	56.1	55.7	59.5	10.0	69.5
	2	59.9	66.4	56.4	66.0	65.6	63.7	62.2	60.1	59.1	57.3	56.9	56.5	59.9	10.0	69.9
	3	59.8	69.7	53.9	69.4	68.9	66.3	63.8	58.3	56.6	54.8	54.3	54.0	59.8	10.0	69.8
	4	61.8	71.2	54.5	71.0	70.5	68.3	66.8	61.1	57.5	55.2	54.9	54.6	61.8	10.0	71.8
	5	66.1	77.4	60.0	76.8	75.9	72.2	69.5	64.4	62.4	60.7	60.4	60.1	66.1	10.0	76.1
	6	62.4	72.3	54.8	71.9	71.2	68.8	67.3	61.8	57.7	55.5	55.2	54.9	62.4	10.0	72.4
Day	7	60.0	70.4	48.0	70.1	69.5	67.4	65.9	59.0	52.5	48.8	48.4	48.1	60.0	0.0	60.0
	8	59.4	69.9	46.6	69.6	68.9	66.9	65.4	58.2	51.4	47.5	47.2	46.8	59.4	0.0	59.4
	9	58.2	69.7	45.8	69.4	68.6	65.7	63.3	56.1	50.2	46.7	46.4	46.0	58.2	0.0	58.2
	10	59.4	71.1	47.2	70.6	69.9	66.7	64.3	57.3	52.5	48.5	48.0	47.4	59.4	0.0	59.4
	11	61.2	71.2	50.0	70.8	70.1	67.8	66.0	61.0	57.1	51.9	51.1	50.3	61.2	0.0	61.2
	12	61.4	70.3	51.4	69.9	69.0	67.2	66.0	61.9	58.2	53.6	52.7	51.7	61.4	0.0	61.4
	13	62.3	73.7	50.7	73.4	72.4	69.0	66.7	61.1	57.1	52.5	51.7	50.9	62.3	0.0	62.3
	14	61.6	70.1	51.6	69.7	69.1	67.3	66.2	62.2	58.7	54.1	52.9	51.9	61.6	0.0	61.6
	15	63.1	70.8	53.4	70.4	69.8	68.3	67.4	64.1	60.8	56.0	55.1	53.8	63.1	0.0	63.1
	16	63.6	71.8	54.2	71.4	70.7	68.8	67.8	64.4	61.1	56.5	55.6	54.5	63.6	0.0	63.6
	17	63.7	72.8	53.4	72.3	71.6	69.4	68.1	64.3	60.3	55.4	54.6	53.7	63.7	0.0	63.7
	18	63.3	72.0	53.6	71.6	71.0	69.2	68.1	64.0	59.9	55.1	54.5	53.8	63.3	0.0	63.3
	19	65.8	74.9	57.8	74.7	73.9	71.0	69.8	66.0	63.4	59.6	58.9	58.1	65.8	5.0	70.8
	20	65.4	75.0	57.1	74.6	74.1	71.5	69.6	65.2	62.2	58.6	57.9	57.3	65.4	5.0	70.4
	21	64.1	70.4	58.2	70.1	69.7	68.4	67.7	65.0	62.7	59.6	59.0	58.4	64.1	5.0	69.1
Night	22	60.9	69.8	54.5	69.5	69.0	66.8	65.2	60.5	57.8	55.6	55.2	54.7	60.9	10.0	70.9
	23	60.5	68.1	55.0	67.8	67.3	65.3	64.1	60.8	58.8	56.3	55.9	55.2	60.5	10.0	70.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	58.2	69.7	45.8	69.4	68.6	65.7	63.3	56.1	50.2	46.7	46.4	46.0
	Max	65.8	75.0	58.2	74.7	74.1	71.5	69.8	66.0	63.4	59.6	59.0	58.4
Energy Average		62.7	Average:		71.2	70.5	68.3	66.8	62.0	57.9	53.6	52.9	52.2
Night	Min	59.5	66.4	53.9	66.0	65.6	63.7	62.1	58.3	56.6	54.8	54.3	54.0
	Max	66.1	77.4	60.0	76.8	75.9	72.2	69.5	64.4	62.4	60.7	60.4	60.1
Energy Average		61.7	Average:		69.6	69.0	66.7	64.9	60.7	58.4	56.5	56.1	55.7

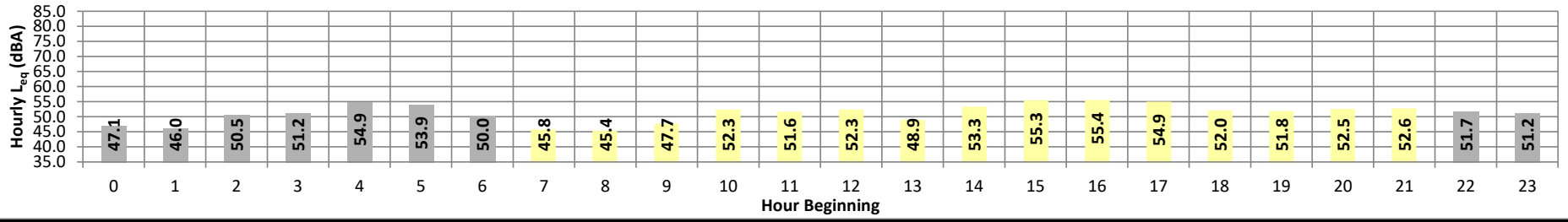
24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
62.4	**62.7**	**61.7**

24-Hour Noise Level Measurement Summary

Date: Tuesday, June 21, 2022 *Location:* L5 - Located south of the existing noise sensitive residence at *Meter:* Piccolo II *JN:* 14848

Project: Amargosa and Palmetto High-Cube Warehouse *Source:* 10376 Wellington Road. *Analyst:* B. Lawson

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	47.1	49.8	44.9	49.6	49.3	48.8	48.5	47.6	46.9	45.6	45.3	45.0	47.1	10.0	57.1
	1	46.0	48.6	43.8	48.4	48.2	47.8	47.6	46.6	45.8	44.5	44.2	43.9	46.0	10.0	56.0
	2	50.5	53.7	48.1	53.5	53.2	52.7	52.3	51.2	50.2	48.8	48.6	48.2	50.5	10.0	60.5
	3	51.2	56.9	48.5	56.4	55.8	54.1	53.2	51.6	50.6	49.2	48.9	48.6	51.2	10.0	61.2
	4	54.9	57.3	53.1	57.1	56.9	56.4	56.2	55.4	54.6	53.7	53.5	53.2	54.9	10.0	64.9
	5	53.9	56.2	52.2	56.0	55.8	55.4	55.1	54.3	53.7	52.7	52.5	52.3	53.9	10.0	63.9
	6	50.0	54.3	48.4	53.4	52.6	51.3	51.0	50.4	49.8	48.9	48.7	48.5	50.0	10.0	60.0
Day	7	45.8	50.9	43.9	50.1	49.2	48.0	47.3	46.1	45.3	44.4	44.2	44.0	45.8	0.0	45.8
	8	45.4	52.3	42.4	51.4	50.5	49.2	48.2	45.4	44.4	43.0	42.8	42.5	45.4	0.0	45.4
	9	47.7	56.0	43.0	54.9	54.0	51.8	51.0	48.4	46.0	43.8	43.5	43.1	47.7	0.0	47.7
	10	52.3	60.0	47.0	59.2	58.2	56.4	55.6	53.1	50.9	47.9	47.5	47.2	52.3	0.0	52.3
	11	51.6	59.6	46.7	59.0	58.3	56.0	55.0	51.9	49.6	47.5	47.2	46.8	51.6	0.0	51.6
	12	52.3	60.4	46.8	59.9	59.1	57.4	56.2	52.7	50.2	47.7	47.3	46.9	52.3	0.0	52.3
	13	48.9	53.9	46.2	53.4	52.9	51.8	51.0	49.4	48.3	46.8	46.6	46.3	48.9	0.0	48.9
	14	53.3	61.2	47.8	60.6	59.8	58.1	56.7	53.7	51.6	48.8	48.3	47.9	53.3	0.0	53.3
	15	55.3	63.1	49.0	62.5	61.8	60.4	59.4	55.8	53.2	50.2	49.7	49.2	55.3	0.0	55.3
	16	55.4	63.8	49.4	63.1	62.3	60.6	59.3	55.7	53.3	50.5	50.1	49.5	55.4	0.0	55.4
	17	54.9	63.1	49.9	62.4	61.6	59.8	58.6	54.9	52.9	50.9	50.5	50.0	54.9	0.0	54.9
	18	52.0	59.0	48.6	58.2	57.4	55.5	54.7	52.4	51.0	49.3	49.0	48.7	52.0	0.0	52.0
	19	51.8	57.8	49.0	56.9	56.2	54.6	53.9	52.3	51.2	49.7	49.4	49.1	51.8	5.0	56.8
	20	52.5	57.4	49.4	57.0	56.5	55.7	55.1	53.1	51.8	50.2	49.9	49.5	52.5	5.0	57.5
	21	52.6	57.2	49.9	56.8	56.3	55.4	54.8	53.2	52.0	50.7	50.4	50.0	52.6	5.0	57.6
Night	22	51.7	55.4	48.9	55.1	54.7	54.2	53.8	52.5	51.1	49.8	49.5	49.1	51.7	10.0	61.7
	23	51.2	55.5	48.3	55.1	54.6	53.8	53.3	51.7	50.7	49.1	48.8	48.4	51.2	10.0	61.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	45.4	50.9	42.4	50.1	49.2	48.0	47.3	45.4	44.4	43.0	42.8	42.5
	Max	55.4	63.8	49.9	63.1	62.3	60.6	59.4	55.8	53.3	50.9	50.5	50.0
Energy Average		52.3	Average:		57.7	56.9	55.4	54.5	51.9	50.1	48.1	47.8	47.4
Night	Min	46.0	48.6	43.8	48.4	48.2	47.8	47.6	46.6	45.8	44.5	44.2	43.9
	Max	54.9	57.3	53.1	57.1	56.9	56.4	56.2	55.4	54.6	53.7	53.5	53.2
Energy Average		51.5	Average:		53.8	53.5	52.7	52.3	51.3	50.4	49.1	48.9	48.6

24-Hour	L_{eq} (dBA) Daytime (7am-10pm)	Nighttime (10pm-7am)
52.0	**52.3**	**51.5**

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	430 vehicles	*Autos:*	15
Peak Hour Percentage:	10.00%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	43 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	25 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	40.0 feet		
Centerline Dist. to Observer:	40.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 38.324
Medium Trucks: 38.093
Heavy Trucks: 38.115

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-15.77	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-33.10	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-29.14	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.1	51.2	49.5	43.4	52.0	52.6
Medium Trucks:	46.8	45.3	38.9	37.4	45.9	46.1
Heavy Trucks:	55.6	54.2	45.1	46.4	54.7	54.8
Vehicle Noise:	57.9	56.3	51.1	48.5	56.9	57.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	12	25	54
CNEL:	6	12	26	56

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	1,000 vehicles	*Autos:*	15
Peak Hour Percentage:	10.00%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	100 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	25 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	40.0 feet		
Centerline Dist. to Observer:	40.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 38.324
Medium Trucks: 38.093
Heavy Trucks: 38.115

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-12.11	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-29.44	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-25.48	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.8	54.9	53.1	47.1	55.7	56.3
Medium Trucks:	50.5	49.0	42.6	41.1	49.5	49.8
Heavy Trucks:	59.2	57.8	48.8	50.0	58.4	58.5
Vehicle Noise:	61.5	60.0	54.8	52.2	60.6	60.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	9	20	44	95
CNEL:	10	21	46	99

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	1,692 vehicles	*Autos:*	15
Peak Hour Percentage:	10.00%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	169 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	25 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	40.0 feet		
Centerline Dist. to Observer:	40.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	89.62%
Medium Trucks:	84.8%	4.9%	10.3%	2.18%
Heavy Trucks:	86.5%	2.7%	10.8%	8.20%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 38.324
Medium Trucks: 38.093
Heavy Trucks: 38.115

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-10.03	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-26.16	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-20.42	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.9	57.0	55.2	49.1	57.8	58.4
Medium Trucks:	53.8	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	64.3	62.9	53.8	55.1	63.4	63.6
Vehicle Noise:	65.7	64.2	57.9	56.4	64.8	65.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	18	39	83	179
CNEL:	19	40	86	186

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Key Pointe Dr.
Road Segment: s/o Amargosa Rd.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	4,700 vehicles	*Autos:*	15
Peak Hour Percentage:	10.00%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	470 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	45 mph		
Near/Far Lane Distance:	25 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	40.0 feet		
Centerline Dist. to Observer:	40.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.004 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 38.324
Medium Trucks: 38.093
Heavy Trucks: 38.115

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-5.39	1.63	-1.20	*-4.59*	0.000	0.000
Medium Trucks:	79.45	-22.72	1.67	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	84.25	-18.76	1.66	-1.20	*-5.56*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.5	61.6	59.8	53.8	62.4	63.0
Medium Trucks:	57.2	55.7	49.3	47.8	56.2	56.5
Heavy Trucks:	66.0	64.5	55.5	56.8	65.1	65.2
Vehicle Noise:	68.3	66.7	61.5	58.9	67.3	67.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	57	123	265
CNEL:	28	60	129	278

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P | Project Name: Amargosa and Palmetto
Road Name: Key Pointe Dr. | Job Number: 14848
Road Segment: s/o Amargosa Rd.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,392 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	539 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	25 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	40.0 feet
Centerline Dist. to Observer:	40.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	92.58%
Medium Trucks:	84.8%	4.9%	10.3%	1.88%
Heavy Trucks:	86.5%	2.7%	10.8%	5.54%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	38.324
Medium Trucks:	38.093
Heavy Trucks:	38.115

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	68.46	-4.85	1.63	-1.20	-4.59	0.000	0.000
Medium Trucks:	79.45	-21.78	1.67	-1.20	-4.87	0.000	0.000
Heavy Trucks:	84.25	-17.09	1.66	-1.20	-5.56	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.0	62.1	60.4	54.3	62.9	63.5
Medium Trucks:	58.1	56.6	50.3	48.7	57.2	57.4
Heavy Trucks:	67.6	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	69.5	68.0	62.3	60.2	68.6	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	32	70	150	323
CNEL:	34	72	156	336

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: n/o Palmetto Wy.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,610 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	861 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.22	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-20.54	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.59	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.5	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	60.0	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	68.3	66.9	57.9	59.1	67.5	67.6
Vehicle Noise:	70.9	69.3	64.3	61.5	69.9	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	107	230	495
CNEL:	52	112	241	519

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: n/o Palmetto Wy.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,130 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	913 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.96	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-20.29	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.33	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.7	64.9	63.1	57.0	65.7	66.3
Medium Trucks:	60.2	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	68.6	67.2	58.1	59.4	67.7	67.9
Vehicle Noise:	71.1	69.5	64.6	61.7	70.2	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	111	239	515
CNEL:	54	116	251	540

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: n/o Palmetto Wy.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,328 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	933 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.07%
Medium Trucks:	84.8%	4.9%	10.3%	1.70%
Heavy Trucks:	86.5%	2.7%	10.8%	4.23%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.86	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-20.29	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.33	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.8	64.9	63.2	57.1	65.8	66.4
Medium Trucks:	60.2	58.7	52.4	50.8	59.3	59.5
Heavy Trucks:	68.6	67.2	58.1	59.4	67.7	67.9
Vehicle Noise:	71.2	69.6	64.6	61.8	70.2	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	240	518
CNEL:	54	117	252	543

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: n/o Palmetto Wy.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,110 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,311 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.39	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-18.72	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-14.76	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.3	66.4	64.7	58.6	67.2	67.8
Medium Trucks:	61.8	60.3	53.9	52.4	60.9	61.1
Heavy Trucks:	70.2	68.7	59.7	60.9	69.3	69.4
Vehicle Noise:	72.7	71.1	66.1	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	141	304	655
CNEL:	69	148	319	687

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: n/o Palmetto Wy.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,308 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,331 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	94.03%
Medium Trucks:	84.8%	4.9%	10.3%	1.71%
Heavy Trucks:	86.5%	2.7%	10.8%	4.26%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.32	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-18.72	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-14.76	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.4	66.5	64.7	58.7	67.3	67.9
Medium Trucks:	61.8	60.3	53.9	52.4	60.9	61.1
Heavy Trucks:	70.2	68.7	59.7	60.9	69.3	69.4
Vehicle Noise:	72.7	71.1	66.2	63.3	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	142	305	658
CNEL:	69	149	320	690

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,530 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	653 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.42	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-21.75	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.79	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.3	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	58.8	57.3	50.9	49.4	57.8	58.1
Heavy Trucks:	67.1	65.7	56.7	57.9	66.3	66.4
Vehicle Noise:	69.7	68.1	63.1	60.3	68.7	69.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	41	89	191	412
CNEL:	43	93	200	432

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,380 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	738 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.89	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-21.21	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.26	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	63.9	62.2	56.1	64.7	65.3
Medium Trucks:	59.3	57.8	51.5	49.9	58.4	58.6
Heavy Trucks:	67.7	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	70.2	68.6	63.6	60.8	69.3	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	96	207	447
CNEL:	47	101	217	469

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,396 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	740 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.95%
Medium Trucks:	84.8%	4.9%	10.3%	1.73%
Heavy Trucks:	86.5%	2.7%	10.8%	4.31%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.88	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-21.21	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.26	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	63.9	62.2	56.1	64.7	65.3
Medium Trucks:	59.3	57.8	51.5	49.9	58.4	58.6
Heavy Trucks:	67.7	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	70.2	68.6	63.6	60.8	69.3	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	96	207	447
CNEL:	47	101	218	469

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,280 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,128 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.04	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-19.37	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-15.41	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.7	65.8	64.0	57.9	66.6	67.2
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.4
Heavy Trucks:	69.5	68.1	59.0	60.3	68.6	68.8
Vehicle Noise:	72.1	70.5	65.5	62.7	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	128	275	593
CNEL:	62	134	289	622

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,296 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,130 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.95%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.04	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-19.37	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-15.41	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.7	65.8	64.0	58.0	66.6	67.2
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.4
Heavy Trucks:	69.5	68.1	59.0	60.3	68.6	68.8
Vehicle Noise:	72.1	70.5	65.5	62.7	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	128	275	593
CNEL:	62	134	289	622

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Amargosa and Palmetto
Road Name: Amargosa Rd. | Job Number: 14848
Road Segment: e/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,340 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	634 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.55	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-21.87	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.92	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.2	63.3	61.5	55.4	64.1	64.7
Medium Trucks:	58.7	57.2	50.8	49.3	57.7	57.9
Heavy Trucks:	67.0	65.6	56.5	57.8	66.1	66.3
Vehicle Noise:	69.6	68.0	63.0	60.2	68.6	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	87	187	404
CNEL:	42	91	197	423

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,620 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	662 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.36	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-21.69	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.73	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.5	61.7	55.6	64.3	64.9
Medium Trucks:	58.9	57.3	51.0	49.4	57.9	58.1
Heavy Trucks:	67.2	65.8	56.7	58.0	66.3	66.5
Vehicle Noise:	69.7	68.1	63.2	60.3	68.8	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	90	193	416
CNEL:	44	94	202	436

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,328 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	733 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	92.95%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	5.21%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.96	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-21.00	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.48	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.7	63.9	62.1	56.0	64.7	65.3
Medium Trucks:	59.5	58.0	51.7	50.1	58.6	58.8
Heavy Trucks:	68.4	67.0	58.0	59.2	67.6	67.7
Vehicle Noise:	70.7	69.1	63.8	61.3	69.7	70.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	103	222	479
CNEL:	50	108	232	500

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,360 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	736 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.90	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-21.23	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.27	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	63.9	62.1	56.1	64.7	65.3
Medium Trucks:	59.3	57.8	51.4	49.9	58.4	58.6
Heavy Trucks:	67.6	66.2	57.2	58.4	66.8	66.9
Vehicle Noise:	70.2	68.6	63.6	60.8	69.3	69.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	96	207	446
CNEL:	47	101	217	468

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Amargosa Rd.
Road Segment: e/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,068 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	807 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.04%
Medium Trucks:	84.8%	4.9%	10.3%	1.83%
Heavy Trucks:	86.5%	2.7%	10.8%	5.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.54	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	81.00	-20.61	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.13	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.2	64.3	62.5	56.5	65.1	65.7
Medium Trucks:	59.9	58.4	52.1	50.5	59.0	59.2
Heavy Trucks:	68.8	67.4	58.3	59.6	67.9	68.1
Vehicle Noise:	71.0	69.5	64.2	61.6	70.1	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	109	235	507
CNEL:	53	114	246	530

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,470 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	2,047 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	0.13	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-17.20	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-13.24	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	71.2	69.3	67.5	61.5	70.1	70.7
Medium Trucks:	64.5	63.0	56.6	55.1	63.5	63.8
Heavy Trucks:	72.4	71.0	62.0	63.2	71.6	71.7
Vehicle Noise:	75.2	73.6	68.8	65.8	74.3	74.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	116	250	538	1,159
CNEL:	122	262	565	1,218

Thursday, September 15, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,240 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	3,924 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.96	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.37	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-10.41	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.0	72.1	70.3	64.3	72.9	73.5
Medium Trucks:	67.3	65.8	59.4	57.9	66.4	66.6
Heavy Trucks:	75.3	73.8	64.8	66.1	74.4	74.5
Vehicle Noise:	78.1	76.5	71.7	68.7	77.1	77.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	179	385	830	1,788
CNEL:	188	405	872	1,879

Thursday, September 15, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,264 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	3,926 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	2.96	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.37	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-10.41	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.0	72.1	70.3	64.3	72.9	73.5
Medium Trucks:	67.3	65.8	59.4	57.9	66.4	66.6
Heavy Trucks:	75.3	73.8	64.8	66.1	74.4	74.5
Vehicle Noise:	78.1	76.5	71.7	68.7	77.1	77.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	179	385	830	1,788
CNEL:	188	405	872	1,879

Thursday, September 15, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: w/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,730 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,173 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	3.22	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.10	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-10.15	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.3	72.4	70.6	64.5	73.2	73.8
Medium Trucks:	67.6	66.1	59.7	58.2	66.6	66.9
Heavy Trucks:	75.5	74.1	65.1	66.3	74.7	74.8
Vehicle Noise:	78.3	76.7	71.9	68.9	77.4	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	186	401	865	1,863
CNEL:	196	422	909	1,958

Thursday, September 15, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Main St.
Road Segment: w/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,754 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,175 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	3.23	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.10	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-10.15	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.3	72.4	70.6	64.5	73.2	73.8
Medium Trucks:	67.6	66.1	59.7	58.2	66.6	66.9
Heavy Trucks:	75.5	74.1	65.1	66.3	74.7	74.8
Vehicle Noise:	78.3	76.7	71.9	68.9	77.4	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	186	401	865	1,863
CNEL:	196	422	909	1,958

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,910 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	1,191 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-2.22	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-19.55	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-15.59	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	68.8	66.9	65.2	59.1	67.7	68.3
Medium Trucks:	62.1	60.6	54.3	52.7	61.2	61.4
Heavy Trucks:	70.1	68.7	59.6	60.9	69.2	69.4
Vehicle Noise:	72.9	71.3	66.5	63.5	71.9	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	81	174	375	808
CNEL:	85	183	394	849

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,510 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	2,951 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.72	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-15.61	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-11.65	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.8	70.9	69.1	63.0	71.7	72.3
Medium Trucks:	66.1	64.6	58.2	56.7	65.1	65.4
Heavy Trucks:	74.0	72.6	63.6	64.8	73.2	73.3
Vehicle Noise:	76.8	75.2	70.4	67.4	75.9	76.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	148	319	686	1,479
CNEL:	155	335	721	1,554

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Main St.
Road Segment: e/o Key Pointe Dr.
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,178 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	3,018 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.69%
Medium Trucks:	84.8%	4.9%	10.3%	1.76%
Heavy Trucks:	86.5%	2.7%	10.8%	4.54%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.80	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-15.45	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-11.34	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.8	70.9	69.2	63.1	71.7	72.4
Medium Trucks:	66.2	64.7	58.4	56.8	65.3	65.5
Heavy Trucks:	74.3	72.9	63.9	65.1	73.5	73.6
Vehicle Noise:	77.0	75.4	70.6	67.6	76.1	76.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	153	329	709	1,529
CNEL:	160	346	745	1,605

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: e/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,250 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	2,725 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.37	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-15.95	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-12.00	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.4	70.5	68.7	62.7	71.3	71.9
Medium Trucks:	65.7	64.2	57.9	56.3	64.8	65.0
Heavy Trucks:	73.7	72.3	63.2	64.5	72.8	73.0
Vehicle Noise:	76.5	74.9	70.1	67.1	75.5	75.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	140	302	651	1,402
CNEL:	147	317	684	1,474

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: e/o Key Pointe Dr.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,918 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	2,792 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.67%
Medium Trucks:	84.8%	4.9%	10.3%	1.77%
Heavy Trucks:	86.5%	2.7%	10.8%	4.56%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	1.47	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-15.78	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-11.66	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	72.5	70.6	68.8	62.8	71.4	72.0
Medium Trucks:	65.9	64.4	58.0	56.5	65.0	65.2
Heavy Trucks:	74.0	72.6	63.6	64.8	73.2	73.3
Vehicle Noise:	76.7	75.1	70.2	67.3	75.8	76.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	145	313	675	1,453
CNEL:	153	329	708	1,526

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: E | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: e/o I-15 NB Ramps

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,530 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,153 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	3.20	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-14.12	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-10.17	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.2	72.3	70.6	64.5	73.1	73.8
Medium Trucks:	67.6	66.1	59.7	58.2	66.6	66.8
Heavy Trucks:	75.5	74.1	65.1	66.3	74.7	74.8
Vehicle Noise:	78.3	76.7	71.9	68.9	77.4	77.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	186	400	862	1,857
CNEL:	195	420	906	1,951

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY | Project Name: Amargosa and Palmetto
Road Name: Main St. | Job Number: 14848
Road Segment: e/o I-15 NB Ramps

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	46,730 vehicles
Peak Hour Percentage:	10.00%
Peak Hour Volume:	4,673 vehicles
Vehicle Speed:	55 mph
Near/Far Lane Distance:	78 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	60.0 feet
Centerline Dist. to Observer:	60.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	3.72	0.46	-1.20	-4.69	0.000	0.000
Medium Trucks:	82.40	-13.61	0.49	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-9.65	0.48	-1.20	-5.34	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.8	72.9	71.1	65.0	73.7	74.3
Medium Trucks:	68.1	66.6	60.2	58.7	67.1	67.4
Heavy Trucks:	76.0	74.6	65.6	66.8	75.2	75.3
Vehicle Noise:	78.8	77.2	72.4	69.4	77.9	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	201	433	932	2,009
CNEL:	211	455	980	2,111

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: OY+P
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	46,967 vehicles	*Autos:*	15
Peak Hour Percentage:	10.00%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	4,697 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	55 mph		
Near/Far Lane Distance:	78 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	60.0 feet		
Centerline Dist. to Observer:	60.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.97%
Medium Trucks:	84.8%	4.9%	10.3%	1.73%
Heavy Trucks:	86.5%	2.7%	10.8%	4.30%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	3.74	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.61	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.65	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	74.8	72.9	71.1	65.1	73.7	74.3
Medium Trucks:	68.1	66.6	60.2	58.7	67.1	67.4
Heavy Trucks:	76.0	74.6	65.6	66.8	75.2	75.3
Vehicle Noise:	78.8	77.2	72.4	69.4	77.9	78.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	201	433	934	2,012
CNEL:	211	455	981	2,114

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	51,280 vehicles	*Autos:*	15
Peak Hour Percentage:	10.00%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	5,128 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	55 mph		
Near/Far Lane Distance:	78 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	60.0 feet		
Centerline Dist. to Observer:	60.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.94%
Medium Trucks:	84.8%	4.9%	10.3%	1.74%
Heavy Trucks:	86.5%	2.7%	10.8%	4.32%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	4.12	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.21	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.25	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	75.2	73.3	71.5	65.4	74.1	74.7
Medium Trucks:	68.5	67.0	60.6	59.1	67.5	67.8
Heavy Trucks:	76.4	75.0	66.0	67.2	75.6	75.7
Vehicle Noise:	79.2	77.6	72.8	69.8	78.3	78.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	214	460	992	2,137
CNEL:	225	484	1,043	2,246

Thursday, September 15, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)

Scenario: GP+P
Road Name: Main St.
Road Segment: e/o I-15 NB Ramps
Project Name: Amargosa and Palmetto
Job Number: 14848

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	51,517 vehicles	*Autos:*	15
Peak Hour Percentage:	10.00%	*Medium Trucks (2 Axles):*	15
Peak Hour Volume:	5,152 vehicles	*Heavy Trucks (3+ Axles):*	15
Vehicle Speed:	55 mph		
Near/Far Lane Distance:	78 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	60.0 feet		
Centerline Dist. to Observer:	60.0 feet		
Barrier Distance to Observer:	0.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	93.97%
Medium Trucks:	84.8%	4.9%	10.3%	1.73%
Heavy Trucks:	86.5%	2.7%	10.8%	4.30%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	45.869
Medium Trucks:	45.676
Heavy Trucks:	45.695

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	4.14	0.46	-1.20	*-4.69*	0.000	0.000
Medium Trucks:	82.40	-13.21	0.49	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	86.40	-9.25	0.48	-1.20	*-5.34*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	75.2	73.3	71.5	65.5	74.1	74.7
Medium Trucks:	68.5	67.0	60.6	59.1	67.5	67.8
Heavy Trucks:	76.4	75.0	66.0	67.2	75.6	75.7
Vehicle Noise:	79.2	77.6	72.9	69.8	78.3	78.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	214	461	993	2,140
CNEL:	225	485	1,044	2,249

Thursday, September 15, 2022

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APPENDIX 9.1:

CADNAA OPERATIONAL NOISE MODEL INPUTS

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14848 - Amargosa and Palmetto

CadnaA Noise Prediction Model: 14848-02.cna
Date: 16.09.22
Analyst: B. Lawson

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Reference Time Day (min)	**960.00**
Reference Time Night (min)	**480.00**
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	45.9	45.9	52.6	60.0	55.0	0.0				5.00	a	6221305.09	2468653.38	5.00
RECEIVERS		R2	41.2	41.2	47.8	60.0	55.0	0.0				5.00	a	6222005.62	2468653.38	5.00
RECEIVERS		R3	37.6	37.5	44.2	60.0	55.0	0.0				5.00	a	6224255.62	2468671.61	5.00
RECEIVERS		R4	43.7	43.7	50.3	60.0	55.0	0.0				5.00	a	6223760.69	2467691.18	5.00
RECEIVERS		R5	47.8	47.8	54.4	60.0	55.0	0.0				5.00	a	6220761.76	2468813.86	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6222315.08	2468173.13	50.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6222272.06	2468172.08	50.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		150.00	0.00	90.00	5.00	a	6222145.08	2468032.52	5.00
POINTSOURCE		CAR01	81.1	81.1	81.1	Lw	81.1					5.00	a	6222438.91	2468247.64	5.00
POINTSOURCE		CAR02	81.1	81.1	81.1	Lw	81.1					5.00	a	6222472.49	2468280.17	5.00
POINTSOURCE		CAR03	81.1	81.1	81.1	Lw	81.1					5.00	a	6222500.82	2468246.59	5.00
POINTSOURCE		CAR04	81.1	81.1	81.1	Lw	81.1					5.00	a	6222607.86	2468355.72	5.00
POINTSOURCE		CAR05	81.1	81.1	81.1	Lw	81.1					5.00	a	6222566.93	2468354.67	5.00
POINTSOURCE		CAR06	81.1	81.1	81.1	Lw	81.1					5.00	a	6222498.72	2468355.72	5.00
POINTSOURCE		CAR07	81.1	81.1	81.1	Lw	81.1					5.00	a	6222451.50	2468354.67	5.00
POINTSOURCE		CAR08	81.1	81.1	81.1	Lw	81.1					5.00	a	6222445.20	2468309.55	5.00
POINTSOURCE		CAR09	81.1	81.1	81.1	Lw	81.1					5.00	a	6222497.67	2468309.55	5.00
POINTSOURCE		CAR10	81.1	81.1	81.1	Lw	81.1					5.00	a	6222557.49	2468309.55	5.00

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		CAR11	81.1	81.1	81.1	Lw	81.1					5.00	a	6222599.46	2468309.55	5.00
POINTSOURCE		CAR12	81.1	81.1	81.1	Lw	81.1					5.00	a	6222604.71	2468416.59	5.00
POINTSOURCE		CAR13	81.1	81.1	81.1	Lw	81.1					5.00	a	6222565.88	2468417.64	5.00
POINTSOURCE		CAR14	81.1	81.1	81.1	Lw	81.1					5.00	a	6222499.77	2468418.68	5.00
POINTSOURCE		CAR15	81.1	81.1	81.1	Lw	81.1					5.00	a	6222453.60	2468418.68	5.00
POINTSOURCE		CAR16	81.1	81.1	81.1	Lw	81.1					5.00	a	6222456.75	2468482.70	5.00
POINTSOURCE		CAR17	81.1	81.1	81.1	Lw	81.1					5.00	a	6222498.72	2468481.65	5.00
POINTSOURCE		CAR18	81.1	81.1	81.1	Lw	81.1					5.00	a	6222566.93	2468480.60	5.00
POINTSOURCE		CAR19	81.1	81.1	81.1	Lw	81.1					5.00	a	6222603.66	2468480.60	5.00
POINTSOURCE		CAR20	81.1	81.1	81.1	Lw	81.1					5.00	a	6222374.90	2468243.44	5.00
POINTSOURCE		CAR21	81.1	81.1	81.1	Lw	81.1					5.00	a	6222376.99	2468305.35	5.00
POINTSOURCE		CAR22	81.1	81.1	81.1	Lw	81.1					5.00	a	6222376.99	2468370.41	5.00
POINTSOURCE		CAR23	81.1	81.1	81.1	Lw	81.1					5.00	a	6222379.09	2468422.88	5.00
POINTSOURCE		CAR24	81.1	81.1	81.1	Lw	81.1					5.00	a	6222379.09	2468479.55	5.00
POINTSOURCE		CAR25	81.1	81.1	81.1	Lw	81.1					5.00	a	6222407.43	2468528.87	5.00
POINTSOURCE		CAR26	81.1	81.1	81.1	Lw	81.1					5.00	a	6222458.85	2468526.77	5.00
POINTSOURCE		CAR27	81.1	81.1	81.1	Lw	81.1					5.00	a	6222514.46	2468525.72	5.00
POINTSOURCE		CAR28	81.1	81.1	81.1	Lw	81.1					5.00	a	6222562.73	2468525.72	5.00
POINTSOURCE		CAR29	81.1	81.1	81.1	Lw	81.1					5.00	a	6222616.25	2468525.72	5.00
POINTSOURCE		CAR30	81.1	81.1	81.1	Lw	81.1					5.00	a	6222666.62	2468511.03	5.00
POINTSOURCE		CAR31	81.1	81.1	81.1	Lw	81.1					5.00	a	6222666.62	2468462.76	5.00
POINTSOURCE		CAR32	81.1	81.1	81.1	Lw	81.1					5.00	a	6222666.62	2468413.44	5.00
POINTSOURCE		CAR33	81.1	81.1	81.1	Lw	81.1					5.00	a	6222668.72	2468363.07	5.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	93.2	93.2	93.2	74.2	74.2	74.2	Lw	93.2									8	a
LINESOURCE		TRUCK02	93.2	93.2	93.2	64.1	64.1	64.1	Lw	93.2									8	a
LINESOURCE		TRUCK03	93.2	93.2	93.2	75.5	75.5	75.5	Lw	93.2									8	a
LINESOURCE		TRUCK04	93.2	93.2	93.2	69.9	69.9	69.9	Lw	93.2									8	a

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
LINESOURCE	8.00	a			6220795.59	2468109.12	8.00	0.00
					6221058.86	2468106.96	8.00	0.00
LINESOURCE	8.00	a			6220414.67	2468018.87	8.00	0.00
					6220431.71	2467971.88	8.00	0.00
					6220445.48	2467925.91	8.00	0.00
					6220574.79	2467946.60	8.00	0.00
					6220714.56	2467953.62	8.00	0.00
					6221789.31	2467947.40	8.00	0.00
					6222137.72	2467947.09	8.00	0.00
					6222289.45	2467963.50	8.00	0.00
					6222458.91	2468004.71	8.00	0.00
					6222640.56	2468078.75	8.00	0.00
					6222808.40	2468180.29	8.00	0.00
					6222868.70	2468226.49	8.00	0.00
					6222911.12	2468183.63	8.00	0.00
LINESOURCE	8.00	a			6220850.17	2467952.84	8.00	0.00
					6220854.32	2468147.29	8.00	0.00
LINESOURCE	8.00	a			6222188.00	2468095.59	8.00	0.00
					6222356.01	2468093.38	8.00	0.00
					6222411.62	2468104.92	8.00	0.00
					6222669.77	2468279.12	8.00	0.00
					6222754.25	2468143.53	8.00	0.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		DOCK01	111.5	111.5	111.5	68.6	68.6	68.6	Lw	111.5					8	a
AREASOURCE		TRAILER01	103.4	103.4	103.4	60.7	60.7	60.7	Lw	103.4					8	a

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	a			6221057.94	2468203.56	8.00	0.00
					6222188.11	2468198.32	8.00	0.00
					6222189.16	2468138.50	8.00	0.00
					6222186.01	2468022.02	8.00	0.00
					6222083.17	2468011.53	8.00	0.00
					6221055.84	2468014.68	8.00	0.00

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
					6221060.03	2468142.70	8.00	0.00
AREASOURCE	8.00	a			6220691.71	2468556.15	8.00	0.00
					6220943.55	2468556.15	8.00	0.00
					6220950.90	2468147.95	8.00	0.00
					6220795.59	2468146.90	8.00	0.00
					6220795.59	2468075.54	8.00	0.00
					6220753.62	2468075.54	8.00	0.00
					6220747.32	2468018.87	8.00	0.00
					6220339.12	2468018.87	8.00	0.00
					6220339.12	2468214.06	8.00	0.00
					6220390.54	2468215.11	8.00	0.00
					6220392.63	2468269.67	8.00	0.00
					6220693.80	2468271.77	8.00	0.00

Building(s)

Name	M.	ID	RB	Residents	Absorption	Height		Coordinates			
						Begin		x	y	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		PROJECT	x	0		45.00	a	6220943.55	2468556.15	45.00	0.00
								6222340.27	2468549.86	45.00	0.00
								6222336.07	2468144.80	45.00	0.00
								6222189.16	2468138.50	45.00	0.00
								6222188.11	2468198.32	45.00	0.00
								6221057.94	2468203.56	45.00	0.00
								6221060.03	2468142.70	45.00	0.00
								6220950.90	2468147.95	45.00	0.00
								6220945.65	2468204.61	45.00	0.00

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APPENDIX 10.1:

CADNAA CONSTRUCTION NOISE MODEL INPUTS

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14848 - Amargosa and Palmetto

CadnaA Noise Prediction Model: 14848-02_Construction.cna
Date: 16.09.22
Analyst: B. Lawson

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Reference Time Day (min)	**960.00**
Reference Time Night (min)	**480.00**
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	59.7	59.7	66.4	60.0	55.0	0.0				5.00	a	6221305.09	2468653.38	5.00
RECEIVERS		R2	59.5	59.5	66.2	60.0	55.0	0.0				5.00	a	6222005.62	2468653.38	5.00
RECEIVERS		R3	45.1	45.1	51.8	60.0	55.0	0.0				5.00	a	6224255.62	2468671.61	5.00
RECEIVERS		R4	47.1	47.1	53.7	60.0	55.0	0.0				5.00	a	6223760.69	2467691.18	5.00
RECEIVERS		R5	55.9	55.9	62.6	60.0	55.0	0.0				5.00	a	6220761.76	2468813.86	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
SITEBOUNDARY		CONSTRUCTION	115.0	115.0	115.0	63.7	63.7	63.7	Lw	115					8	a

Name	Height			Coordinates			
	Begin		End	x	y	z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	8.00	a		6220330.99	2468589.92	8.00	0.00
				6222996.82	2468570.58	8.00	0.00
				6222995.76	2468420.93	8.00	0.00
				6222959.73	2468380.23	8.00	0.00
				6222921.90	2468341.21	8.00	0.00
				6222882.34	2468303.93	8.00	0.00
				6222841.13	2468268.49	8.00	0.00
				6222798.36	2468234.95	8.00	0.00

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
			6222754.12	2468203.38	8.00	0.00
			6222708.49	2468173.85	8.00	0.00
			6222661.57	2468146.41	8.00	0.00
			6222613.45	2468121.12	8.00	0.00
			6222564.25	2468098.04	8.00	0.00
			6222514.04	2468077.21	8.00	0.00
			6222462.95	2468058.68	8.00	0.00
			6222416.45	2468044.04	8.00	0.00
			6222369.41	2468031.30	8.00	0.00
			6222321.88	2468020.49	8.00	0.00
			6222273.95	2468011.62	8.00	0.00
			6222225.71	2468004.69	8.00	0.00
			6222177.22	2467999.74	8.00	0.00
			6222128.57	2467996.76	8.00	0.00
			6220865.00	2468002.77	8.00	0.00
			6220805.40	2468005.36	8.00	0.00
			6220745.74	2468005.80	8.00	0.00
			6220686.11	2468004.07	8.00	0.00
			6220626.58	2468000.19	8.00	0.00
			6220567.22	2467994.15	8.00	0.00
			6220508.13	2467985.96	8.00	0.00
			6220449.37	2467975.64	8.00	0.00
			6220391.02	2467963.20	8.00	0.00
			6220333.16	2467948.66	8.00	0.00

APPENDIX 10.2:

CADNAA CONCRETE POUR NOISE MODEL INPUTS

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14848 - Amargosa and Palmetto

CadnaA Noise Prediction Model: 14848-02_Concrete.cna
Date: 16.09.22
Analyst: B. Lawson

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Reference Time Day (min)	**960.00**
Reference Time Night (min)	**480.00**
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	47.3	47.3	54.0	60.0	55.0	0.0				5.00	a	6221305.09	2468653.38	5.00
RECEIVERS		R2	47.2	47.2	53.8	60.0	55.0	0.0				5.00	a	6222005.62	2468653.38	5.00
RECEIVERS		R3	29.9	29.9	36.5	60.0	55.0	0.0				5.00	a	6224255.62	2468671.61	5.00
RECEIVERS		R4	31.7	31.7	38.3	60.0	55.0	0.0				5.00	a	6223760.69	2467691.18	5.00
RECEIVERS		R5	40.3	40.3	47.0	60.0	55.0	0.0				5.00	a	6220761.76	2468813.86	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
BUILDING		PROJECT	100.3	100.3	100.3	53.6	53.6	53.6	Lw	100.3					8	a

Name	Height			Coordinates			
	Begin		End	x	y	z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BUILDING	8.00	a		6220943.55	2468556.15	8.00	0.00
				6222340.27	2468549.86	8.00	0.00
				6222336.07	2468144.80	8.00	0.00
				6222189.16	2468138.50	8.00	0.00
				6222188.11	2468198.32	8.00	0.00
				6221057.94	2468203.56	8.00	0.00
				6221060.03	2468142.70	8.00	0.00
				6220950.90	2468147.95	8.00	0.00

Name	Height				Coordinates			
	Begin		End		x	y	z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
					6220945.65	2468204.61	8.00	0.00

APPENDIX K
Amargosa and Palmetto High-Cube Warehouse
Traffic Impact Analysis

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE REVISED TRAFFIC IMPACT ANALYSIS

City of Hesperia

August 21, 2025

gandini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

AMARGOSA AND PALMETTO HIGH-CUBE WAREHOUSE REVISED TRAFFIC IMPACT ANALYSIS

City of Hesperia

August 21, 2025

prepared by

Bryan Crawford
Giancarlo Ganddini, PE, PTP

GANDDINI GROUP, INC.
555 Parkcenter Drive, Suite 225
Santa Ana, California 92705
714.795.3100 | ganddini.com

Project No. 19522

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EXECUTIVE SUMMARY

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The currently vacant site is proposed to be developed with a 499,850 square foot high-cube fulfillment center warehouse building. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2027.

The initial traffic impact analysis (TIA) for this proposed development was completed on August 18, 2022. The TIA was revised on February 10, 2023 to include a trip generation comparison analysis. Comments were received from TKE Engineering based on a review of the August 2022 TIA dated January 9, 2025. The comments can be summarized as stating that the August 2022 TIA needed to be updated to present day conditions. This revised TIA updates the August 2022 and February 2023 TIA's to current conditions based on the review comments from TKE Engineering.

Project Trip Generation

The proposed project is forecast to generate 1,083 daily Passenger Car Equivalents (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

Levels of Service

The study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

Vehicle Miles Traveled (VMT) Analysis

Based on review of the SBCTA VMT Screening Tool, the proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

1. INTRODUCTION

This section describes the purpose of this study and the project description. Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with technical terms related to transportation engineering and planning.

This section describes the purpose of this traffic impact analysis, project location, proposed development, and study area.

PURPOSE AND OBJECTIVES

The purpose of this traffic impact analysis is to assess potential transportation impacts resulting from development of the proposed project both in the context of the California Environmental Quality Act (CEQA) and City of Hesperia discretionary authority. This study has been prepared in consultation with the City of Hesperia as documented in Appendix B.

For CEQA purposes, this study evaluates the significance of project-related transportation impacts with respect to vehicle miles traveled (VMT) thresholds established by the City of Hesperia, as the lead agency, and identifies the appropriate measures to mitigate such impacts, if any. This study also evaluates non-CEQA impacts and the need for corrective measures, if necessary, relating to General Plan Level of Service standards.

HISTORICAL CONTEXT

The initial traffic impact analysis (TIA) for this proposed development was completed on August 18, 2022. The TIA was revised on February 10, 2023 to include a trip generation comparison analysis. Comments were received from TKE Engineering based on a review of the August 2022 TIA dated January 9, 2025. The comments can be summarized as stating that the August 2022 TIA needed to be updated to present day conditions. This revised TIA updates the August 2022 and February 2023 TIA's to current conditions based on the review comments from TKE Engineering.

PROJECT DESCRIPTION

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. Figure 1 shows the project location map.

The currently vacant site is proposed to be developed with a 499,714 square foot high-cube fulfillment center warehouse building. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. For purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2027. Figure 2 illustrates the project site plan.

STUDY AREA

Based on the study intersections identified in the approved scoping agreement (Appendix B), the study area consists of the following study intersections within the City of Hesperia and California Department of Transportation jurisdictions:

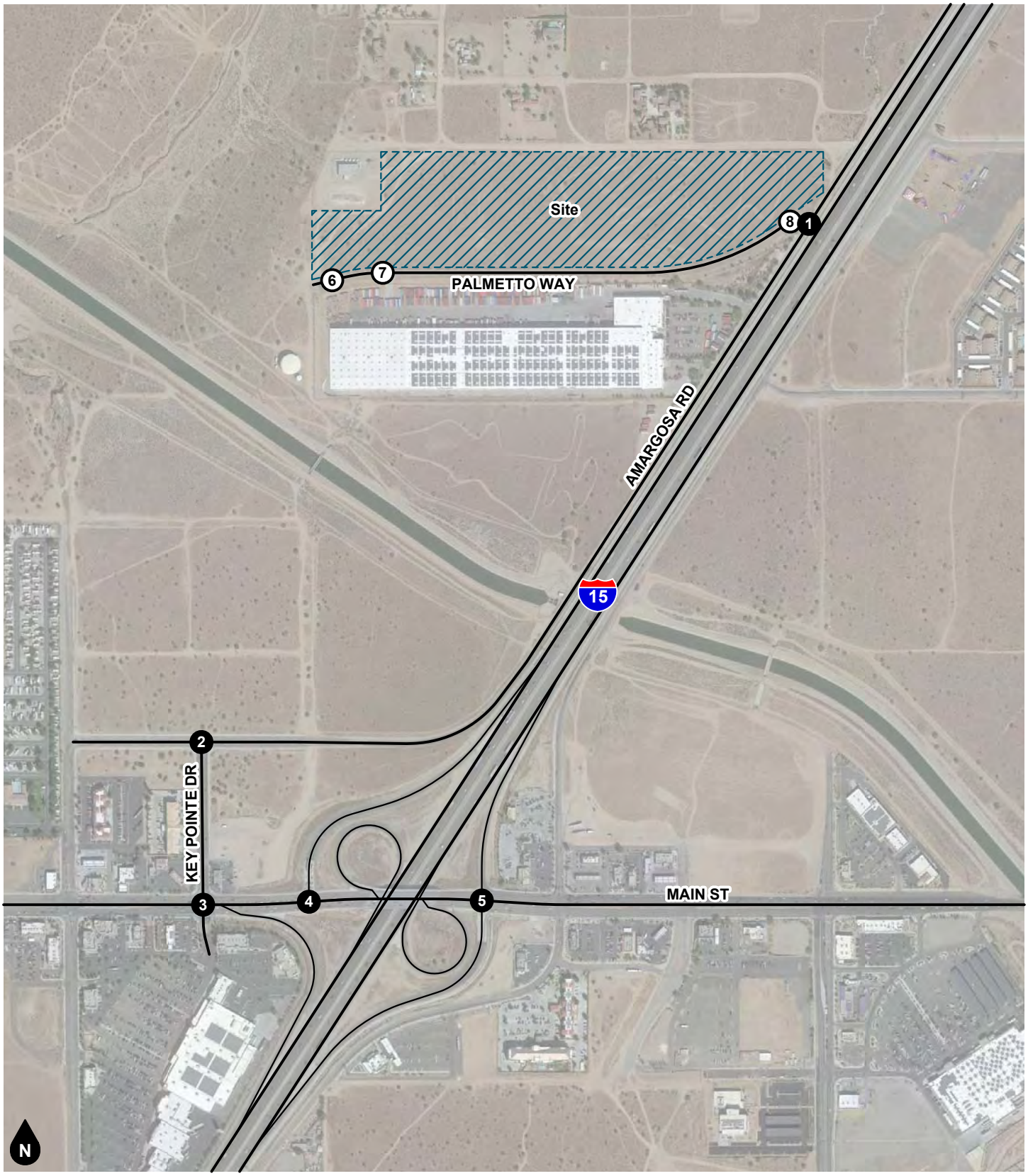
Study Intersections[1]	Jurisdiction
1. Amargosa Road (NS) at Palmetto Way (EW)	City of Hesperia
2. Key Pointe Drive (NS) at Amargosa Road (EW)	City of Hesperia
3. Key Pointe Drive (NS) at Main Street (EW)	City of Hesperia
4. I-15 SB Offramp (NS) at Main Street (EW)	Caltrans[2]
5. I-15 NB Ramps (NS) at Main Street (EW)	Caltrans[2]
6. Project West Driveway (NS) at Palmetto Way (EW)	City of Hesperia
7. Project Central Driveway (NS) at Palmetto Way (EW)	City of Hesperia
8. Project East Driveway (NS) at Palmetto Way (EW)	City of Hesperia

ANALYSIS SCENARIOS

The following scenarios are analyzed during typical weekday AM and PM peak hour conditions:

- Existing
- Opening Year (2027) Without Project
- Opening Year (2027) With Project
- General Plan Buildout (2040) Without Project
- General Plan Buildout (2040) With Project

[1] (NS) = north-south roadway; (EW) = east-west roadway; NB = Northbound; SB = Southbound
[2] Caltrans = California Department of Transportation



Legend

(#) Study Intersection

(#) Project Driveway

Figure 1
Project Location Map

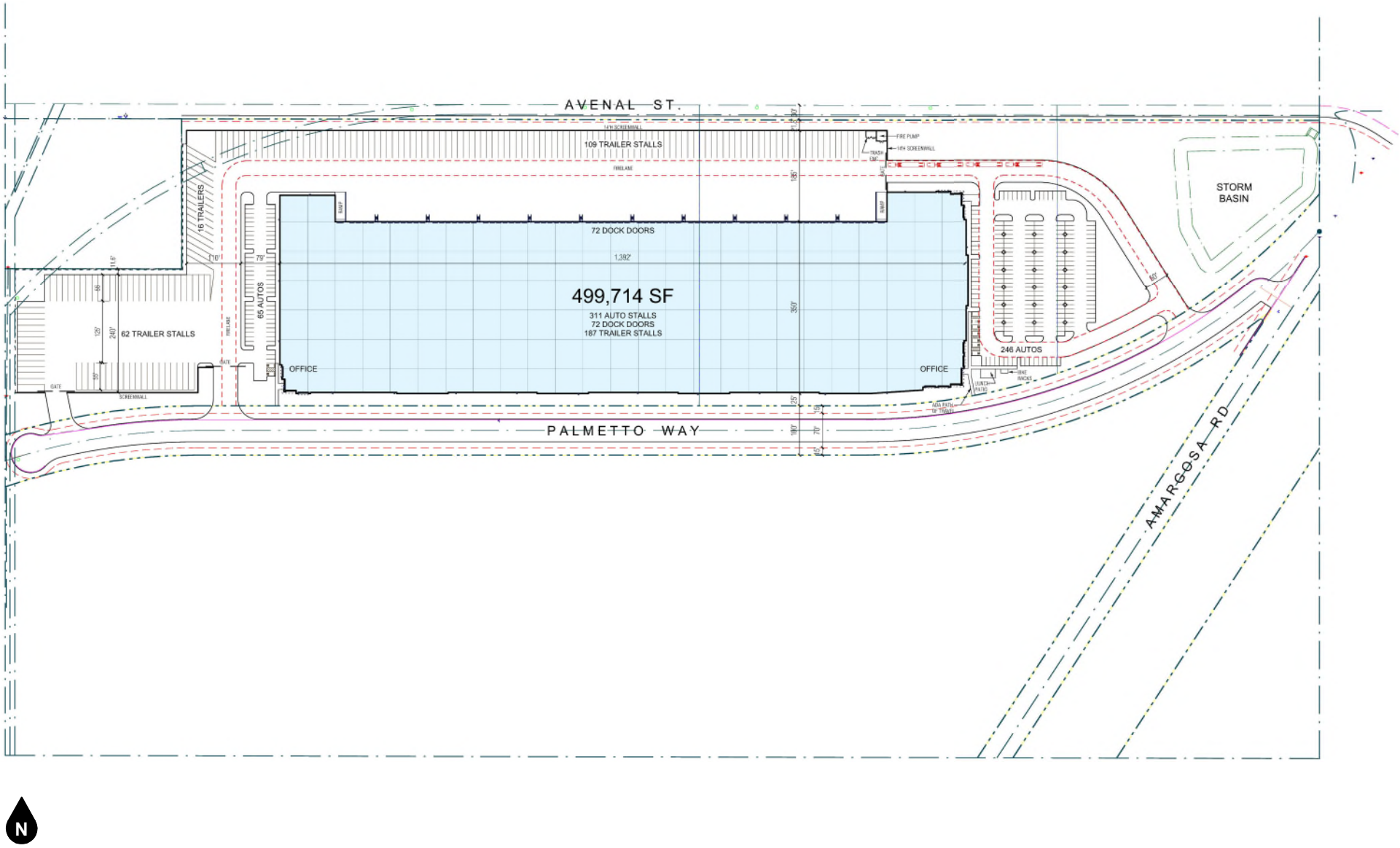


Figure 2
Site Plan

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies. This traffic impact analysis was conducted in accordance with the guidelines established within the City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020).

LEVEL OF SERVICE/GENERAL PLAN CONFORMANCE (NON-CEQA)

Intersection Delay Methodology

The technique used to assess the performance of intersections is known as the intersection delay methodology based on the procedures contained in the *Highway Capacity Manual* (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service. Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

In accordance with City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020), Existing and future conditions were analyzed using optimized signal timing between 60-130 seconds, 10 second minimum phase time, two seconds of lost time per critical phase, and Passenger Car Equivalent (PCE) factors of 1.5 for 2-axle, 2.0 for 3-axle, and 3.0 for 4+-axle. The following saturation flow rates were utilized for existing and opening year:

- 1,800 vehicles per hour for exclusive thru and exclusive right turn lanes
- 1,700 vehicles per hour for exclusive left turn lanes
- 1,600 vehicles per hour for exclusive dual left turn lanes
- 1,500 vehicles per hour for exclusive triple left turn lanes

For future scenarios (Future Year 2040) a peak hour factor of 0.95 was used along with the following saturation flow rates:

- 1,900 vehicles per hour for exclusive thru and exclusive right turn lanes
- 1,800 vehicles per hour for exclusive double right turn lanes
- 1,800 vehicles per hour for exclusive left turn lanes
- 1,700 vehicles per hour for exclusive dual left turn lanes
- 1,600 vehicles per hour for exclusive triple left turn lanes

Intersection delay analysis was performed using the Vistro software.

Performance Standards

City of Hesperia. The City of Hesperia has established LOS D as the minimum acceptable Level of Service along all City maintained roads (including intersections).

California Department of Transportation. As stated in the Guide for the Preparation of Traffic Impact Studies (State of California, 2002), "California Department of Transportation endeavors to maintain a target LOS [Level of Service] at the transition between LOS "C" and LOS "D" on State highway facilities". The California Department of Transportation acknowledges this may not always be feasible and recommends consultation with the California Department of Transportation to determine the appropriate target Level of Service. For consistency with local requirements, this analysis defines Level of Service D as the minimum acceptable Level of Service for State Highway facilities.

Requirements for Improvements

City of Hesperia. For study intersections within the City of Hesperia jurisdiction, a traffic impact occurs if:

- The addition of peak hour project generated trips is forecast to cause an intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of peak hour project generated trips worsens the delay at an intersection operating at an unacceptable Level of Service (E or F) in the baseline condition.

If a project is forecast to cause an operational traffic impact, feasible improvements that will reduce the impact to an acceptable LOS are identified. Improvements can be in many forms, including the addition of lanes, traffic control modification, or demand management measures.

California Department of Transportation. Based on the established performance standards for City of Hesperia a potentially operational transportation impact is defined to occur if:

- The addition of project-generated trips is forecast to cause the performance of a study intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of project generated trips is forecast to worsen the performance of a study intersection operating at unacceptable Level of Service (E or F) in the baseline condition.

VEHICLE MILES TRAVELED METHODOLOGY (CEQA)

The methodology used to evaluate the impact of land use and transportation projects under CEQA is known as vehicle miles traveled (VMT). In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Additional information and a project assessment is provided in the "Vehicle Miles Traveled" section presented later in this report.

3. EXISTING CONDITIONS

EXISTING ROADWAY SYSTEM

Figure 3 identifies the lane geometry and intersection traffic controls for Existing conditions based on a field survey of the study area. Regional access to the project site is provided by the I-15 Freeway located adjacent to the project site to the east. Key roadways providing local circulation include Key Pointe Drive, Amargosa Road, Palmetto Way, and Main Street.

GENERAL PLAN CONTEXT

Figure 4 shows the City of Hesperia General Plan Circulation Element roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Hesperia standard roadway cross-sections are illustrated on Figure 5.

TRANSIT SERVICE

Figure 7 shows Existing public transit facilities and routes in the project vicinity. As shown on Figure 6, the study area is currently served by Victor Valley Transit Routes 20 and 114 along Amargosa Road adjacent to the project site.

BICYCLE FACILITIES

The City of Hesperia Non-Motorized Transportation Plan is illustrated on Figure 7. This plan shows existing and proposed bike paths within the City of Hesperia. There are currently no existing bike routes adjacent to the project site. Main Street east of the I-15 Freeway is classified as a Class I Bike Path.

EXISTING PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project vicinity are shown on Figure 8. Sidewalks are not provided on Amargosa Road adjacent to the project site.

TRUCK ROUTES

The City of Hesperia truck routes are shown on Figure 9. The City of Victorville General Plan does not identify Amargosa Road south of Bear Valley Road to the project site as a truck route.

EXISTING ROADWAY VOLUMES

Existing peak hour traffic conditions are based upon morning peak period and evening peak period intersection turning movement counts obtained in May 2022 during typical weekday conditions. The weekday morning peak period was counted between 7:00 AM and 9:00 AM, and the weekday evening peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix C. Figure 10 and Figure 11 show the Existing AM and PM peak hour intersection turning movement volumes.

Since the initial traffic counts were conducted in 2022, these traffic counts were increased by an ambient growth rate of 2.0% per year over three years (1.061% total) to reflect existing 2025 conditions.

EXISTING LEVEL OF SERVICE

The intersection Levels of Service for Existing conditions have been calculated and are shown in Table 1. Detailed intersection Level of Service worksheets are provided in Appendix C.

As shown in Table 1, the study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

Table 1
Existing Intersection Levels of Service

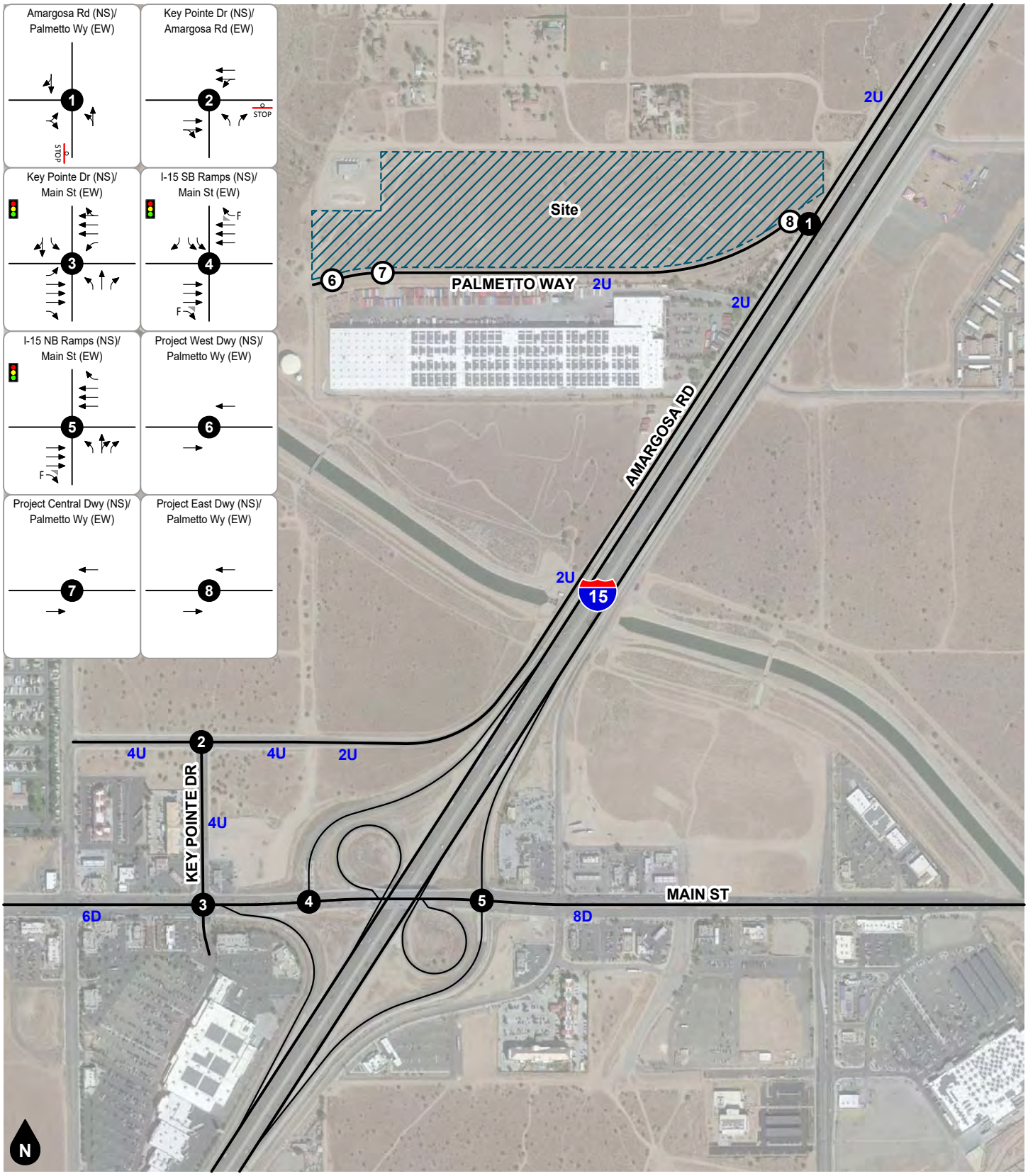
Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	8.8	A	9.7	A
3. Key Pointe Drive (NS) at Main Street (EW)	TS	15.1	B	24.2	C
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	8.4	A	11.2	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	4.3	A	12.9	B

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

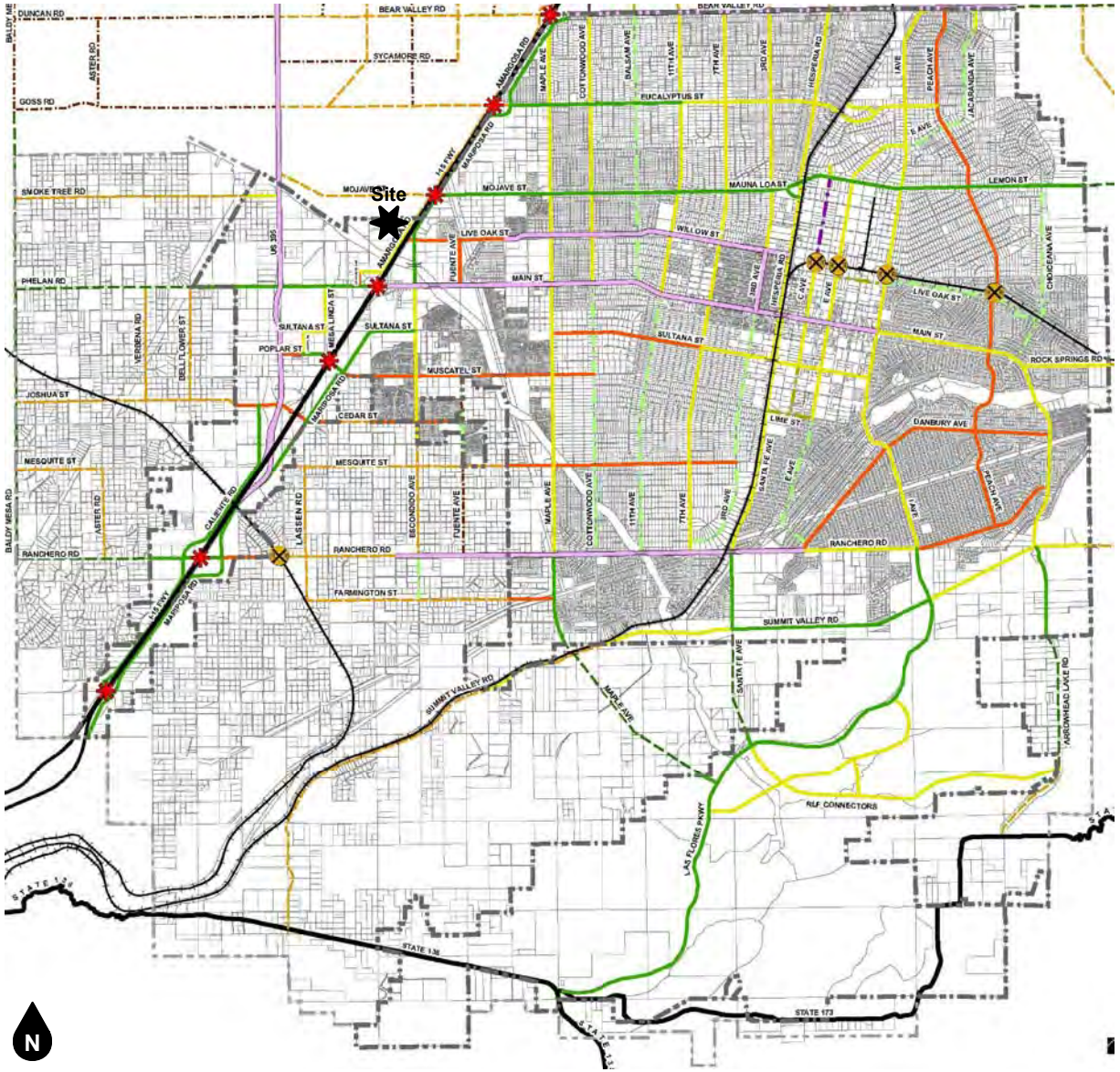
(3) LOS = Level of Service



Legend

- Traffic Signal
- Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- F Free Right Turn Lane

Figure 3
Existing Lane Geometry and Intersection Traffic Controls



Arterials

	(RoW)	(Curb-Curb)
Major Arterial	(120')	(104')* (92')**
Arterial	(100')	(72')
Secondary Arterial	(80')	(50')
Industrial Collector	(70')	(46')**
Suburban Collector	(60')	(36')**
Rural Collector	(60')	(48')* (40')**

* with bike lane
** without bike lane

Streets Outside City

- Major Arterial
- Arterial
- Colllector

Misc.

- City Boundary
- Sphere of Influence
- Railroad
- At Grade Crossing
- Bridge/overcrossing/undercrossing
- Freeway Interchange

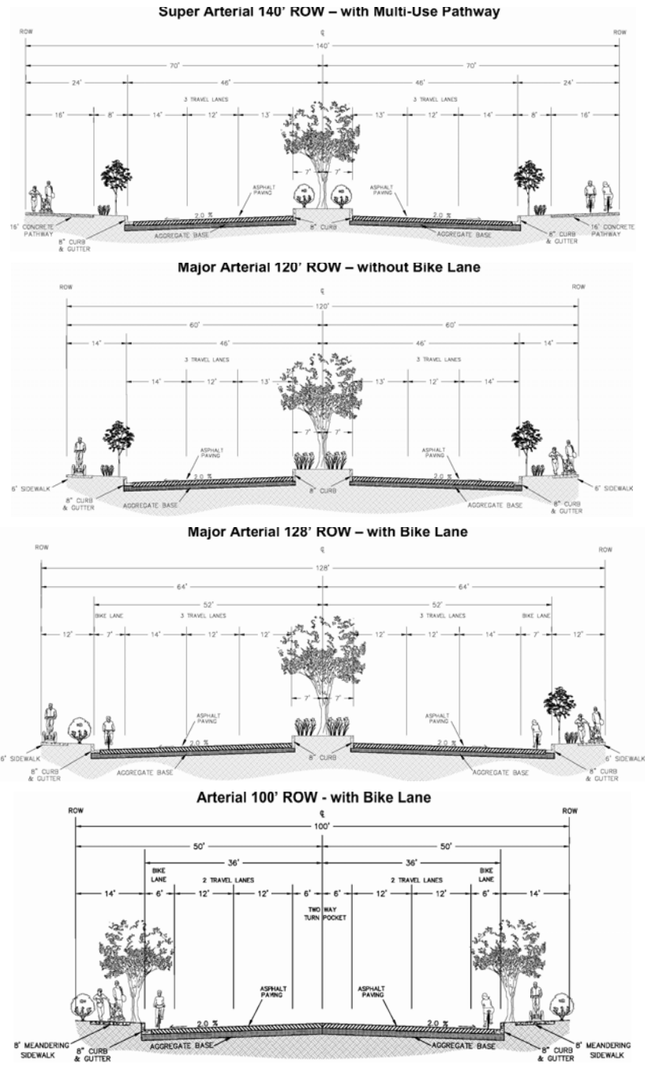
Special Street Section

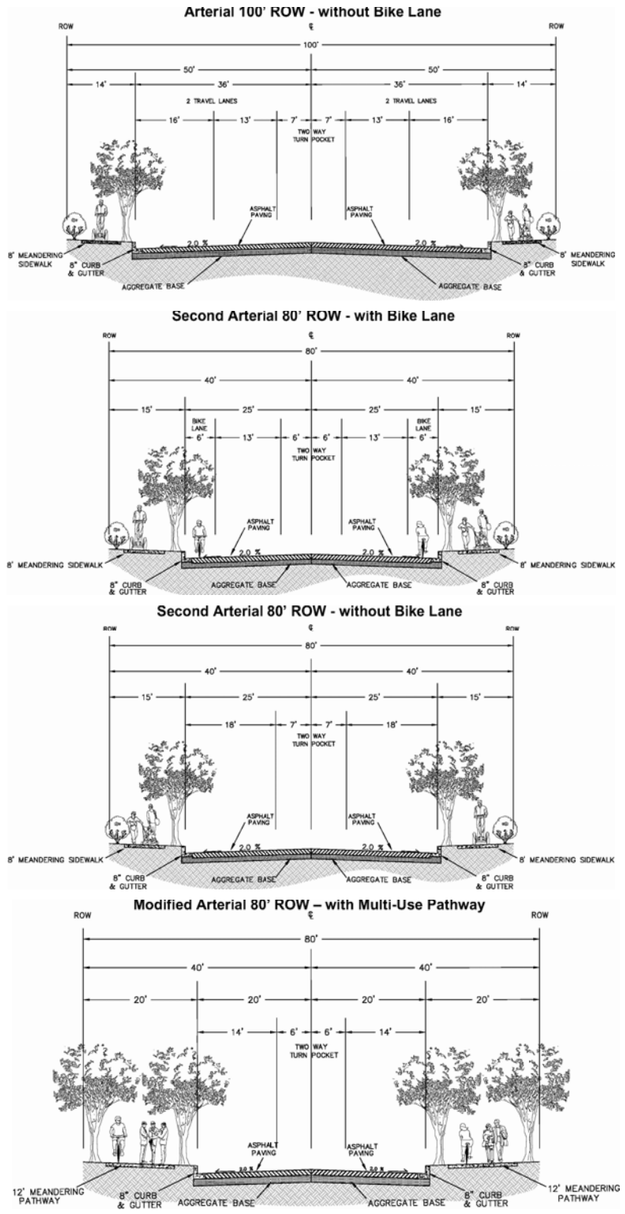
- Special Street

	(RoW)	(Curb-Curb)
Ranchero Road	(140')	(92')
Highway 395	(130')	(106')
Bear Valley Road (halfwidth)	(64')	(45')
Enhanced 3rd Avenue	(100')	(76')
Main Street Corridor "A"	(120')	(88')
Main Street Corridor "B"	(105')	(70')
Modified Live Oak-Willow St	(80')	(40')

Figure 4
City of Hesperia General Plan Circulation Element

Source: City of Hesperia





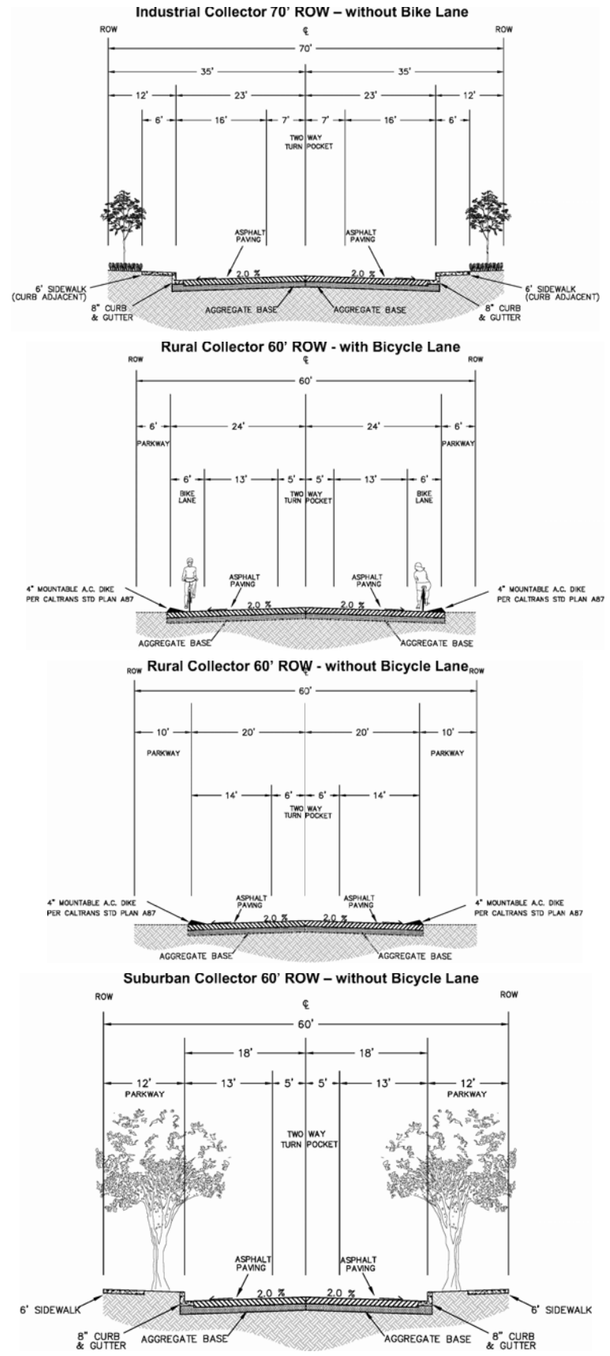
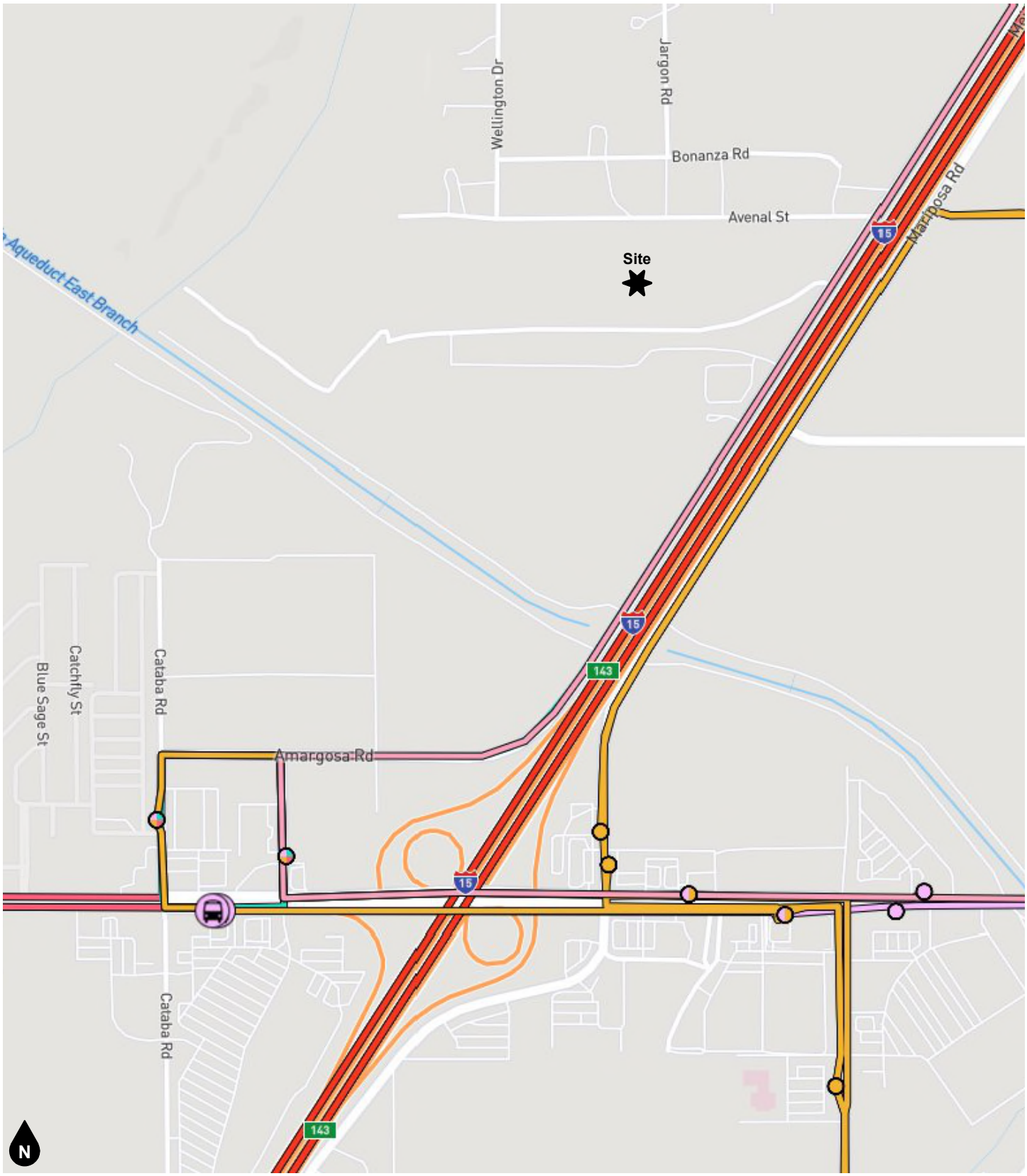


Figure 5
City of Hesperia General Plan Roadway Cross-Sections

Source: City of Hesperia



114 Fort Irwin - Hesperia
64 Hesperia Post Office - Super Target
68 Hesperia Post Office - Super Target
20 Hesperia Super Target - Pinon Hills
15 Barstow - Victorville - San Benrardino
21 Hesperia Super Target - Wrightwood

Figure 6
Victory Valley Transit Routes

Source: Victor Valley Transit

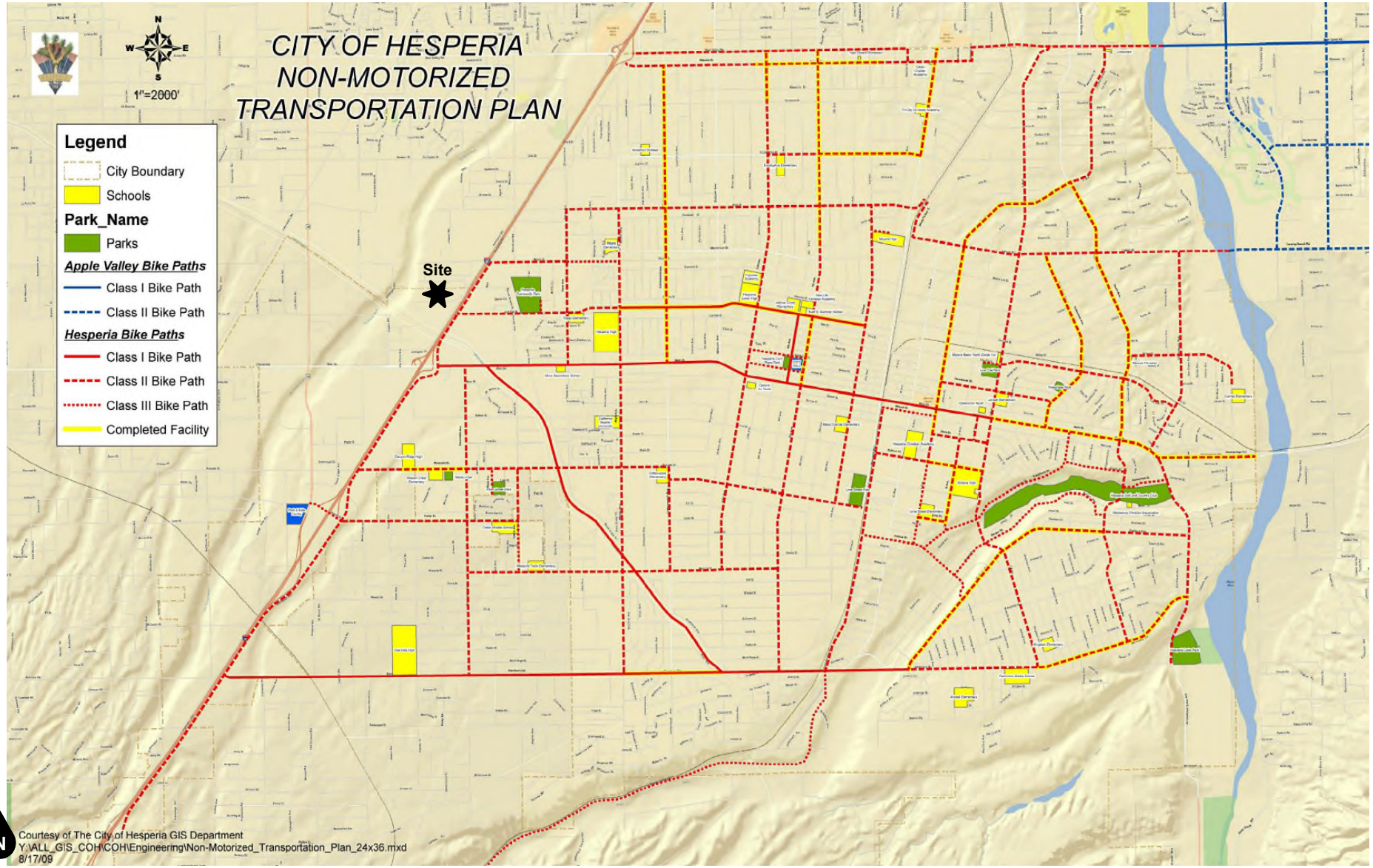
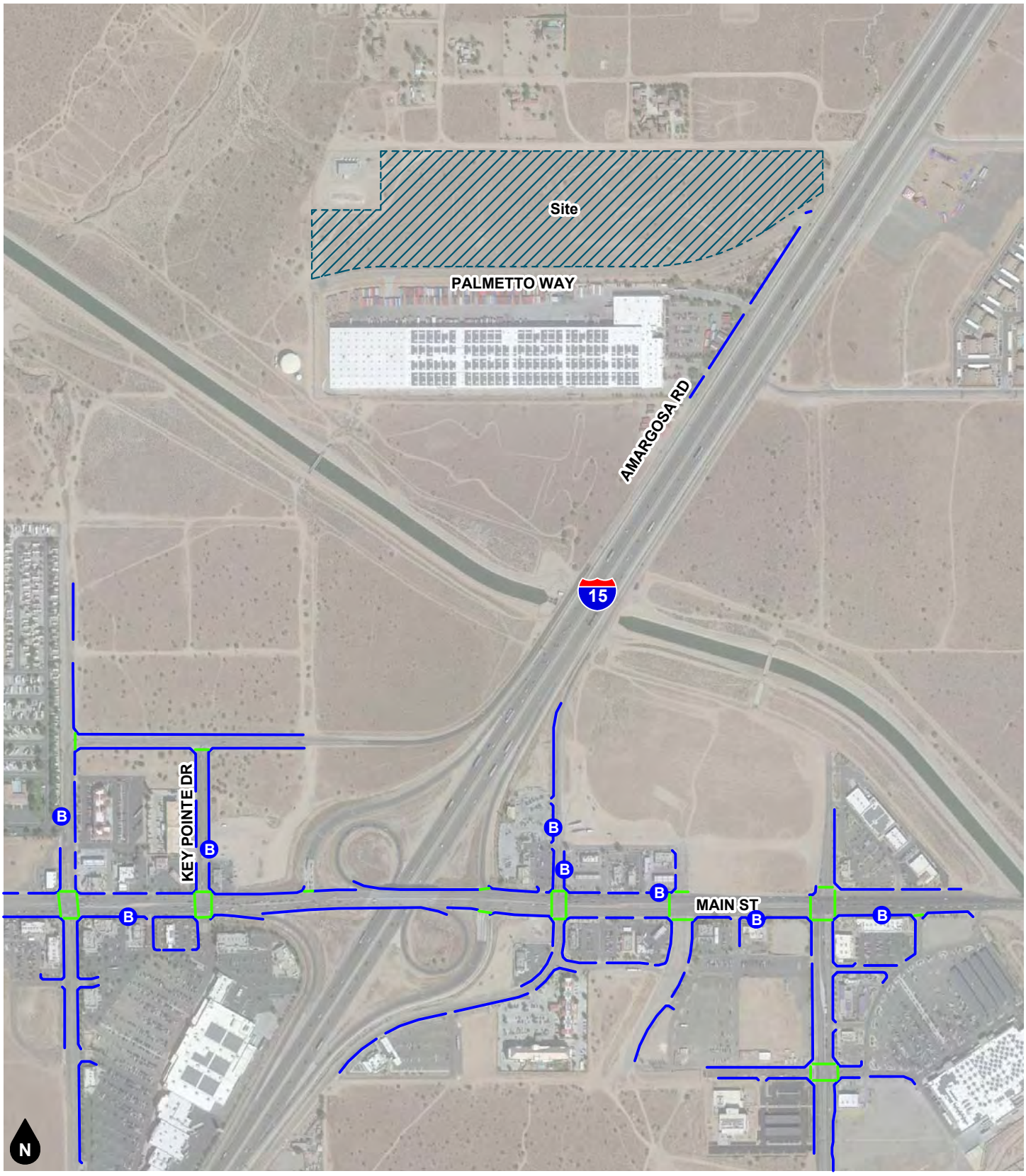


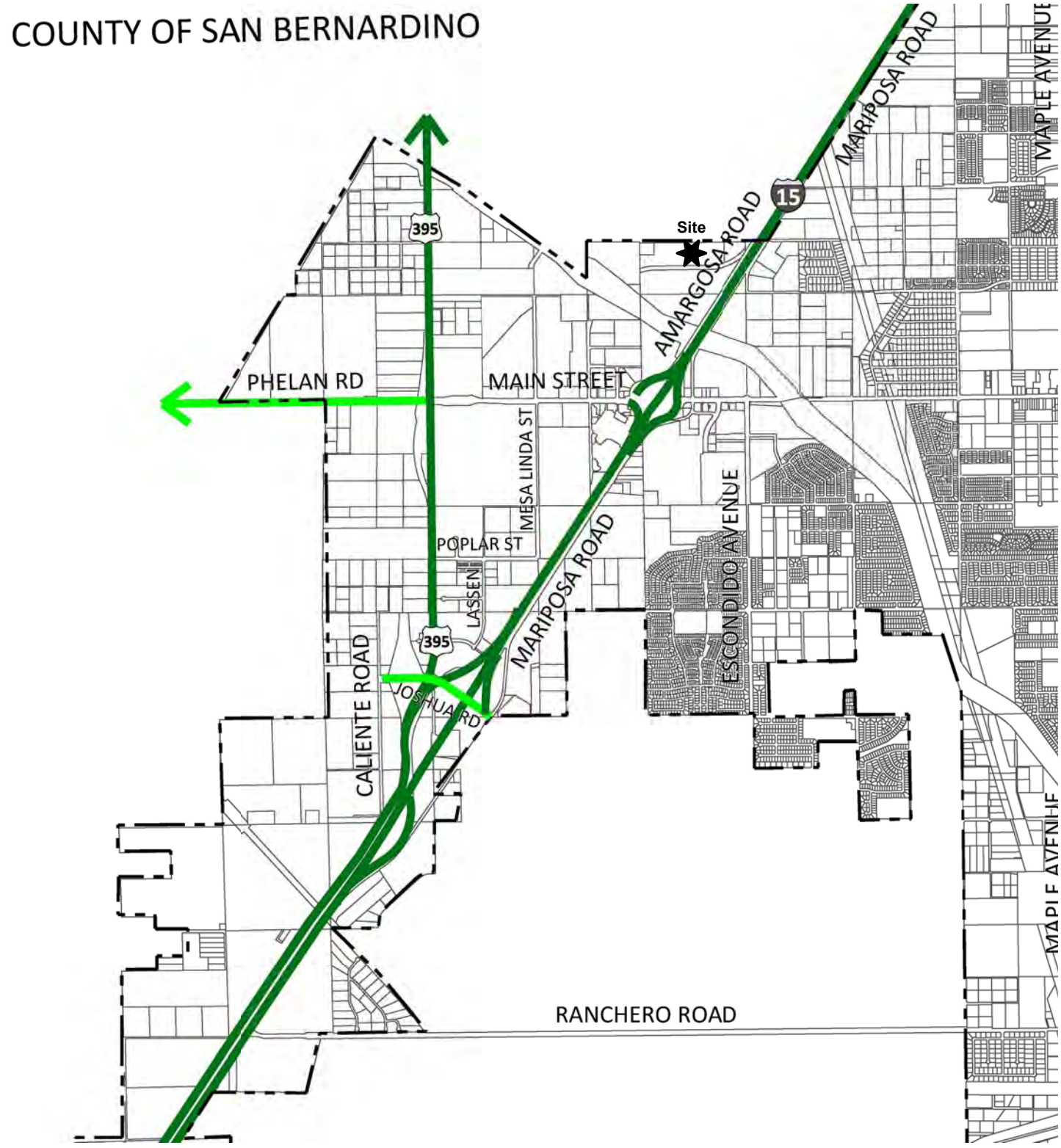
Figure 7
City of Hesperia General Plan Non-Motorized Transportation Plan Map

Source: City of Hesperia



Legend
- Sidewalk
- Cross Walk
- B Bus Stop

Figure 8
Existing Pedestrian Facilities



Source: City of Hesperia

Figure 9
City of Hesperia Truck Route Map

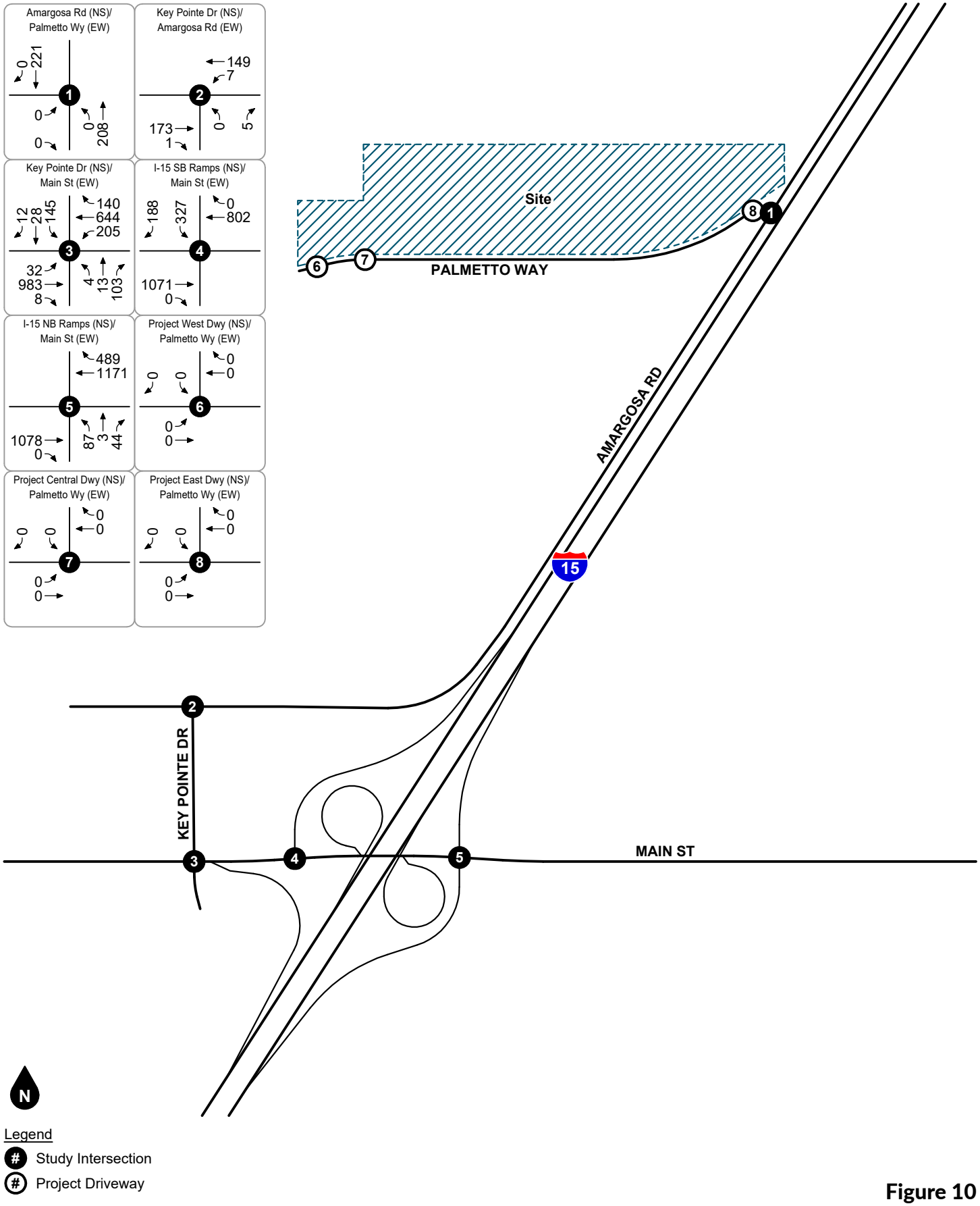


Figure 10
Existing AM Peak Hour Intersection Turning Movement Volumes

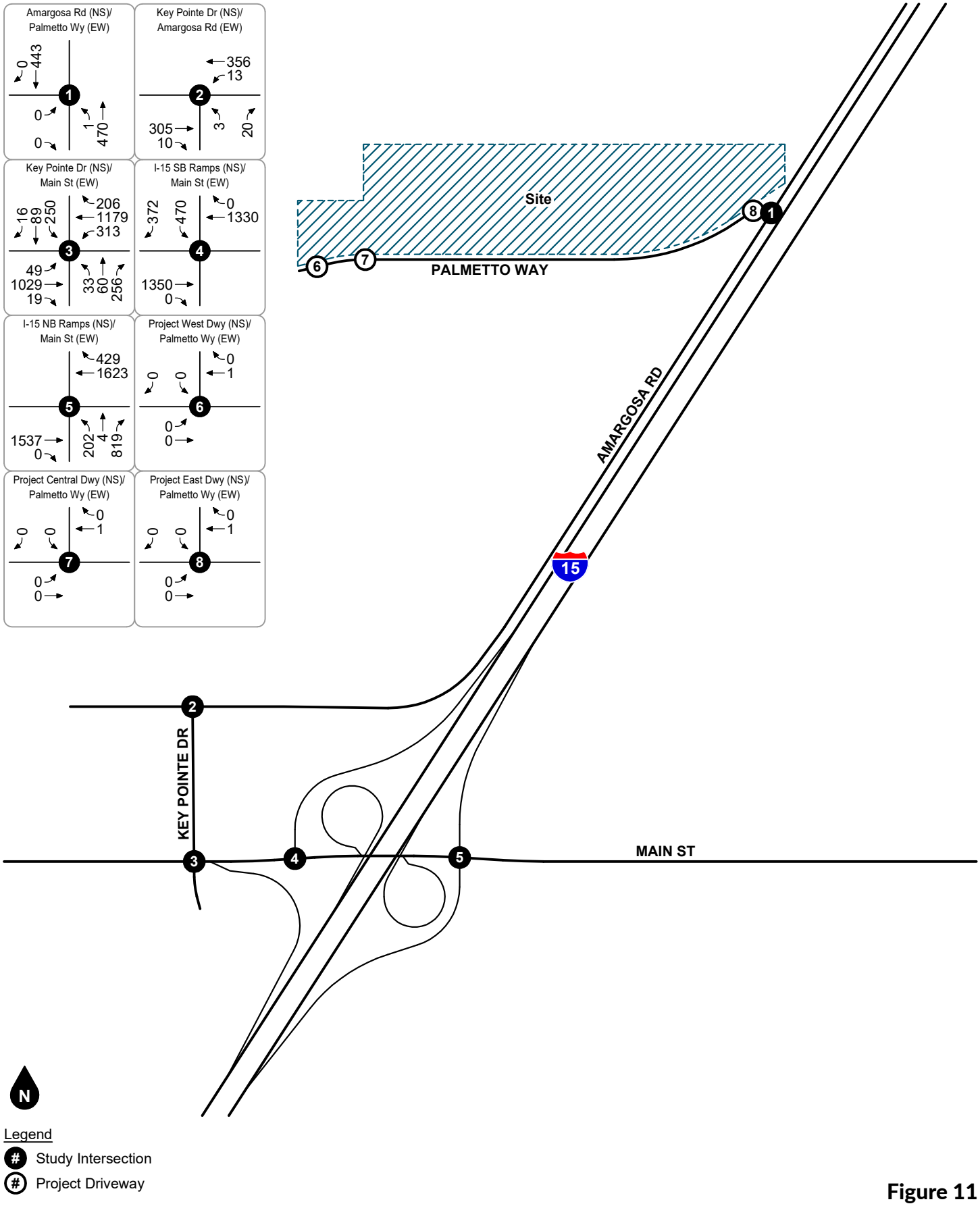


Figure 11
Existing PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated on figures contained in this section.

PROJECT TRIP GENERATION

shows the project trip generation based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Based on review of the ITE land use description, trip generation rates for ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) were determined to adequately represent the proposed use and were selected for calculation of the project trip generation forecast. The number of trips generated is determined by multiplying the trip generation rates and directional distributions by the land use quantity.

As shown in Table 2, the proposed project is forecast to generate 905 daily trips, including 74 trips during the AM peak hour and 77 trips during the PM peak hour.

Truck Trips

The project trip generation was also calculated in terms of Passenger Car Equivalent (PCE) trips. The percentage of truck trips was obtained from the ITE *Trip Generation Manual*. The truck mix by axle type was determined based on South Coast Air Quality Management District (SCAQMD) recommendations for high-cube warehousing facilities without cold-storage. Truck trips were converted to PCE trips based on the following factors: 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with four or more axles.

As also shown in Table 2, the proposed project is forecast to generate 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

Review of High-Cube Warehouse Rates

ITE provides the following land use description for Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort):

> *A high-cube warehouse (HCW) is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. A typical HCW has a high level of on-site automation and logistics management. The automation and logistics enable highly-efficient processing of goods through the HCW. High-cube fulfillment center warehouses include warehouses characterized by a significant storage function and direct distribution of ecommerce product to end users. These facilities typically handle smaller packages and quantities than other types of HCWs and often contain multiple mezzanine levels.*

The ITE database further categorizes high-cube fulfillment center warehousing into sort or non-sort facilities. A sort facility is defined as a fulfillment center that ships out smaller items, requiring extensive manual sorting, whereas a non-sort facility ships out large box items that are processed primarily through automation. The trip generation rates for sorting facilities are substantially greater than rates for non-sort facilities; however, they are based on a limited sample size and may not necessarily represent typical operations. In addition, the limited data for sort facilities suggests a higher passenger car/light truck trip generation rate but lower heavy truck trip generation rate compared to non-sort facilities. Other types of high-cube warehouses include high-cube parcel hub and cold-storage warehouses, neither of which are currently contemplated uses for the proposed project.

Based on review of the available ITE data, ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) was determined to best represent a typical user for the type of building proposed, while still providing a more conservative daily trip estimate compared to a standard warehouse (ITE Land Use Code 150). To avoid grossly overestimating potential impacts and constructing unnecessary improvements, the project trip generation was calculated based on ITE Land Use Code 155 - High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort). *Should a future potential tenant intend to occupy the building for use as a high-cube fulfillment center sorting facility, parcel hub, or cold-storage warehouse, preparation of a transportation demand management plan and/or further traffic analysis may be necessary to verify consistency with the trip estimates and findings of this study.*

Note that the proposed development will be limited to a non-sort warehouse fulfillment center. If a sorting facility is proposed, additional analysis will be required.

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figure 12 to Figure 15 show the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns were developed using engineering judgment in consultation with City of Hesperia staff and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

Project AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 16 and Figure 17, respectively.

ALTERNATIVE LAND USE TRIP GENERATION

An alternative land use trip generation analysis has been conducted to determine the difference in trips generated between the proposed project as a High-Cube Warehouse Fulfillment Center Warehouse (Non-Sort) land use versus the project site at the same square footage as a Shopping Center land use.

Table 3 shows the alternative land use (commercial retail) trip generation based on regression equations from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 820 (Shopping Center (>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use.

It should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 3 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative land use trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021) since Amargosa Road adjacent to the project site is a low volume roadway and pass-by trips would be minimal.

As shown in Table 3, the alternative land use is forecast to generate a total of approximately 18,915 daily trips, including 429 trips during the AM peak hour and 1,798 trips during the PM peak hour without a pass-by trips reduction.

TRIP GENERATION COMPARISON

Table 4 shows the difference in project trip generation between the proposed project and the alternative land use. The purpose of this analysis is to highlight the substantial decrease in trips generated between the proposed industrial land use in comparison to an equivalent size commercial retail development that could be permitted in accordance with the current land use designation.

As shown in Table 4, the proposed project is forecast to generate approximately 17,832 fewer daily trips compared to a shopping center land use of equivalent size, including 339 fewer trips during the AM peak hour and 1,717 fewer trips during the PM peak hour. Appendix D includes the *Amargosa and Palmeto High-Cube Warehouse Trip Generation Comparison Analysis* (Ganddini Group, Inc., November 28,2022) which is a supplemental analysis that goes into greater detail regarding differences in turning movements at the study area intersections.

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.714 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 3
Alternative Land Use Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Units[2]	% In	% Out	Equation	% In	% Out	Equation	Daily Equation
Shopping Center (>150k)	ITE 820	TSF	62%	38%	T=0.59(X) + 133.55	48%	52%	LN(T) = 0.72Ln(X) + 3.02	T = 26.11(X) + 5863.73

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units[3]	In	Out	Total	In	Out	Total	Daily
Shopping Center (>150k)	499.850	TSF	266	163	429	863	935	1,798	18,915

Notes:
(1) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.

(2) TSF = Thousand Square Feet

Table 4
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	Daily
Project[1]	65	25	90	32	49	81	1,083
Alternative Land Use[2]	266	163	429	863	935	1,798	18,915
Difference	**-201**	**-138**	**-339**	**-831**	**-886**	**-1,717**	**-17,832**
	-76%	**-85%**	**-79%**	**-96%**	**-95%**	**-95%**	**-94%**

Notes:
(1) See Table 2.
(2) See Table 3.

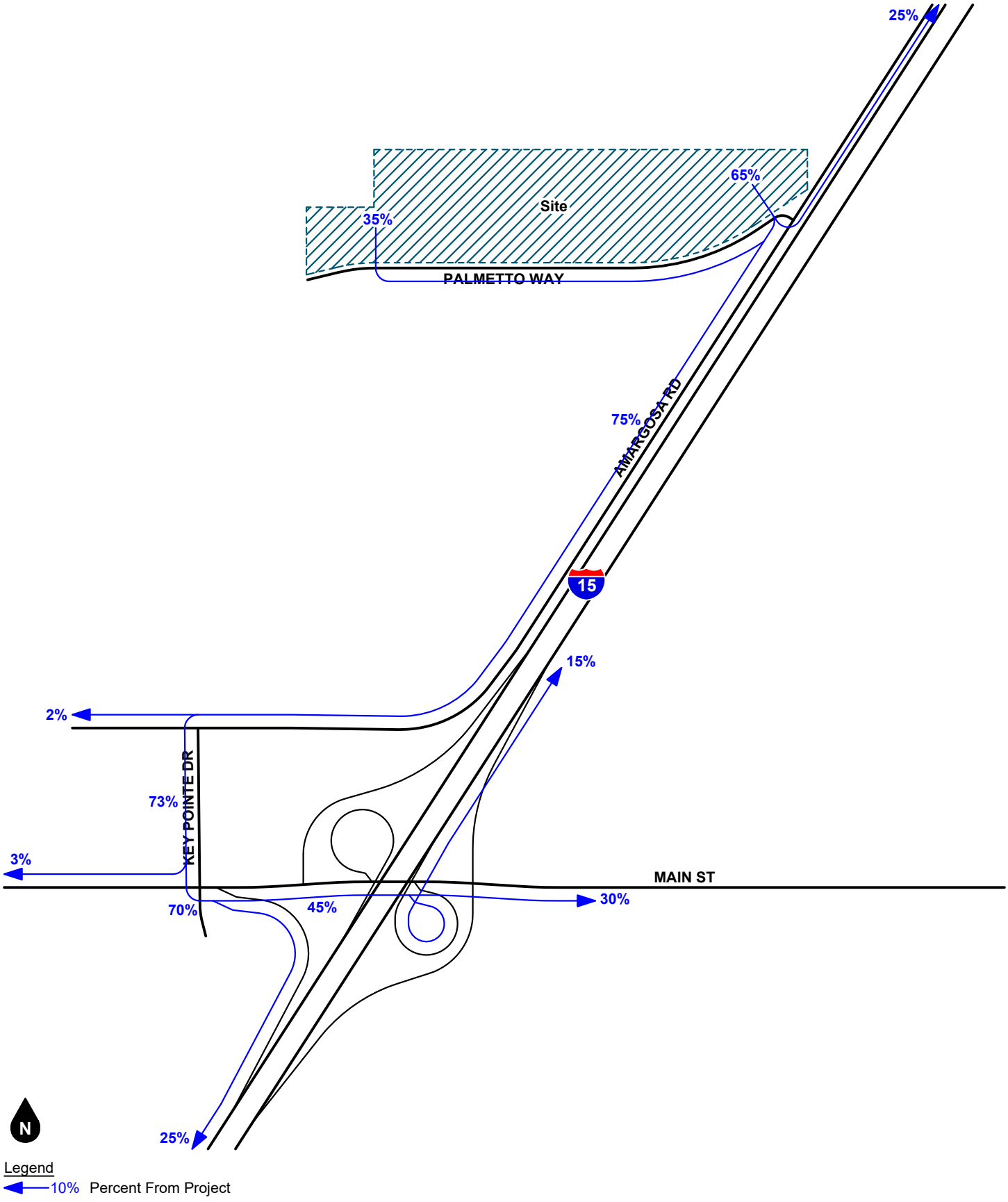


Figure 12
Project Outbound Trip Distribution - Cars

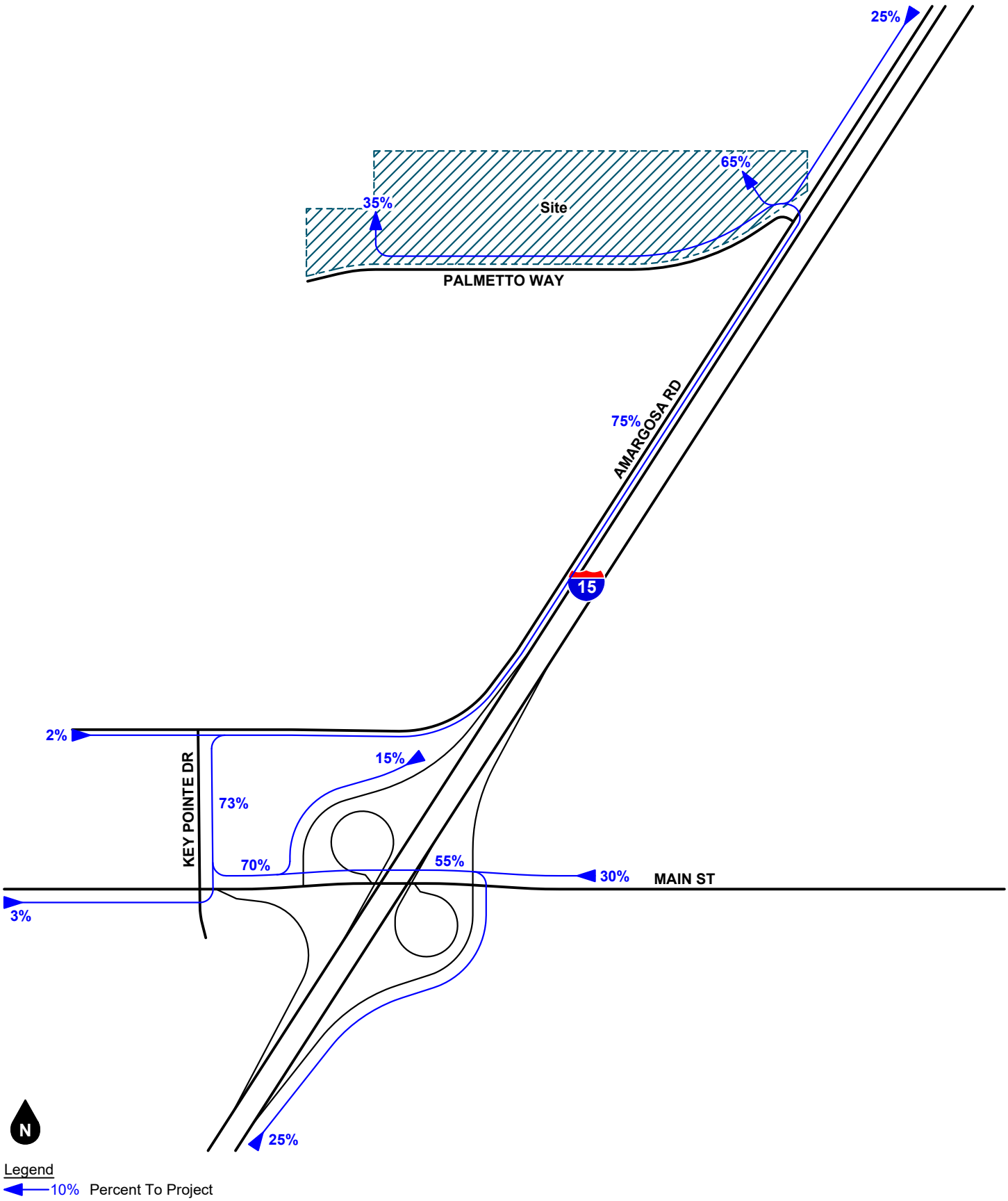


Figure 13
Project Inbound Trip Distribution - Cars

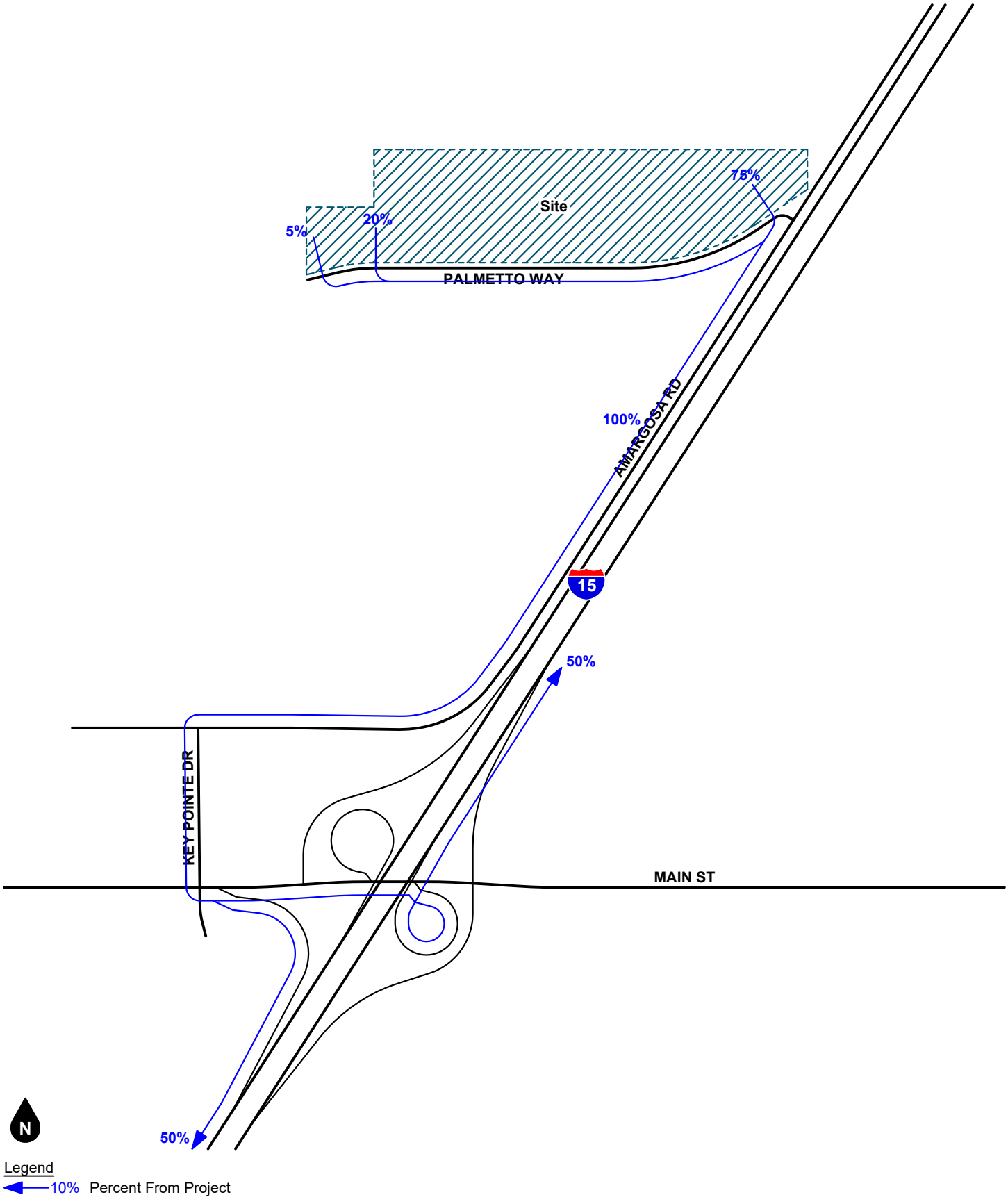


Figure 14
Project Outbound Trip Distribution - Trucks

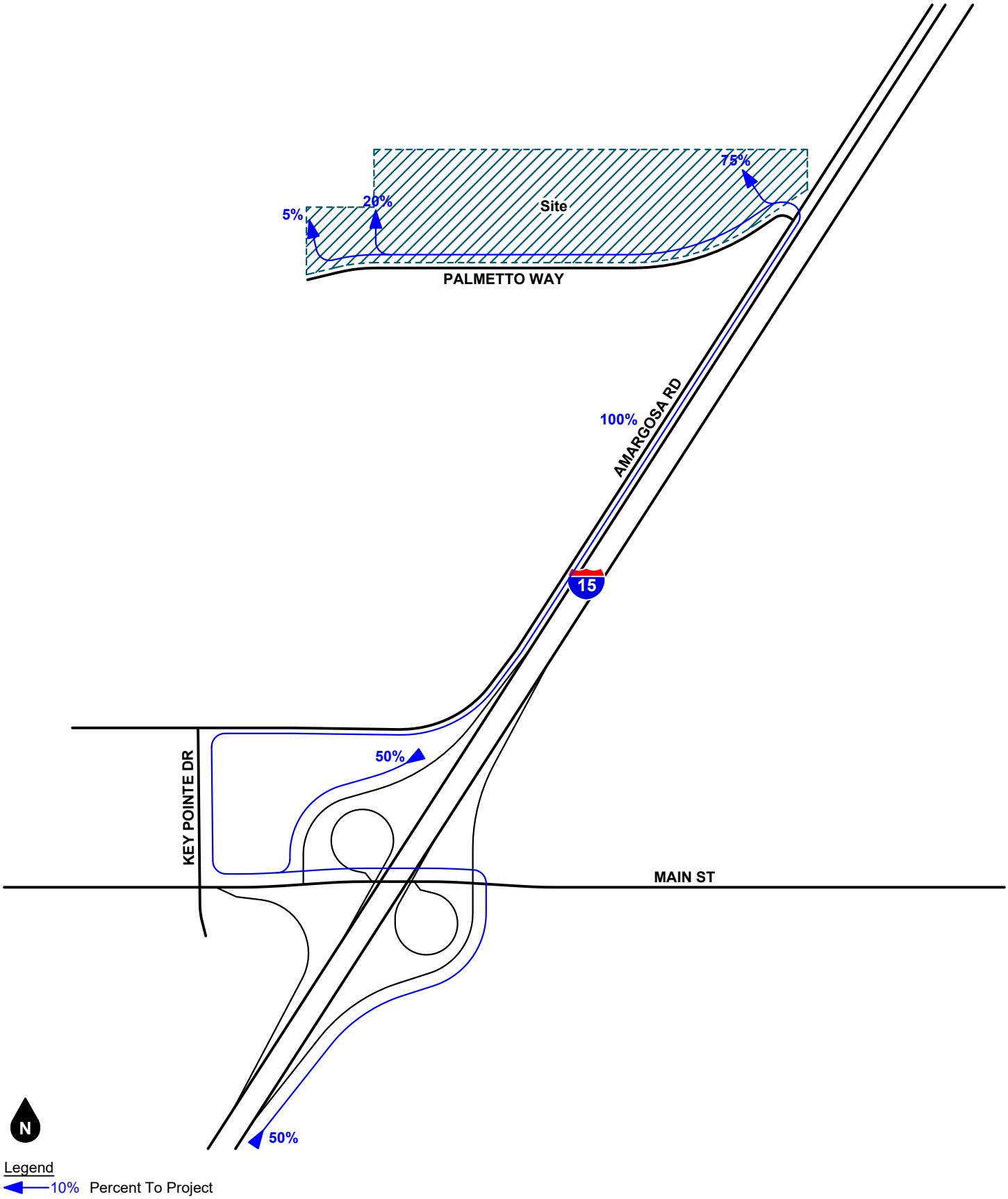


Figure 15
Project Inbound Trip Distribution - Trucks

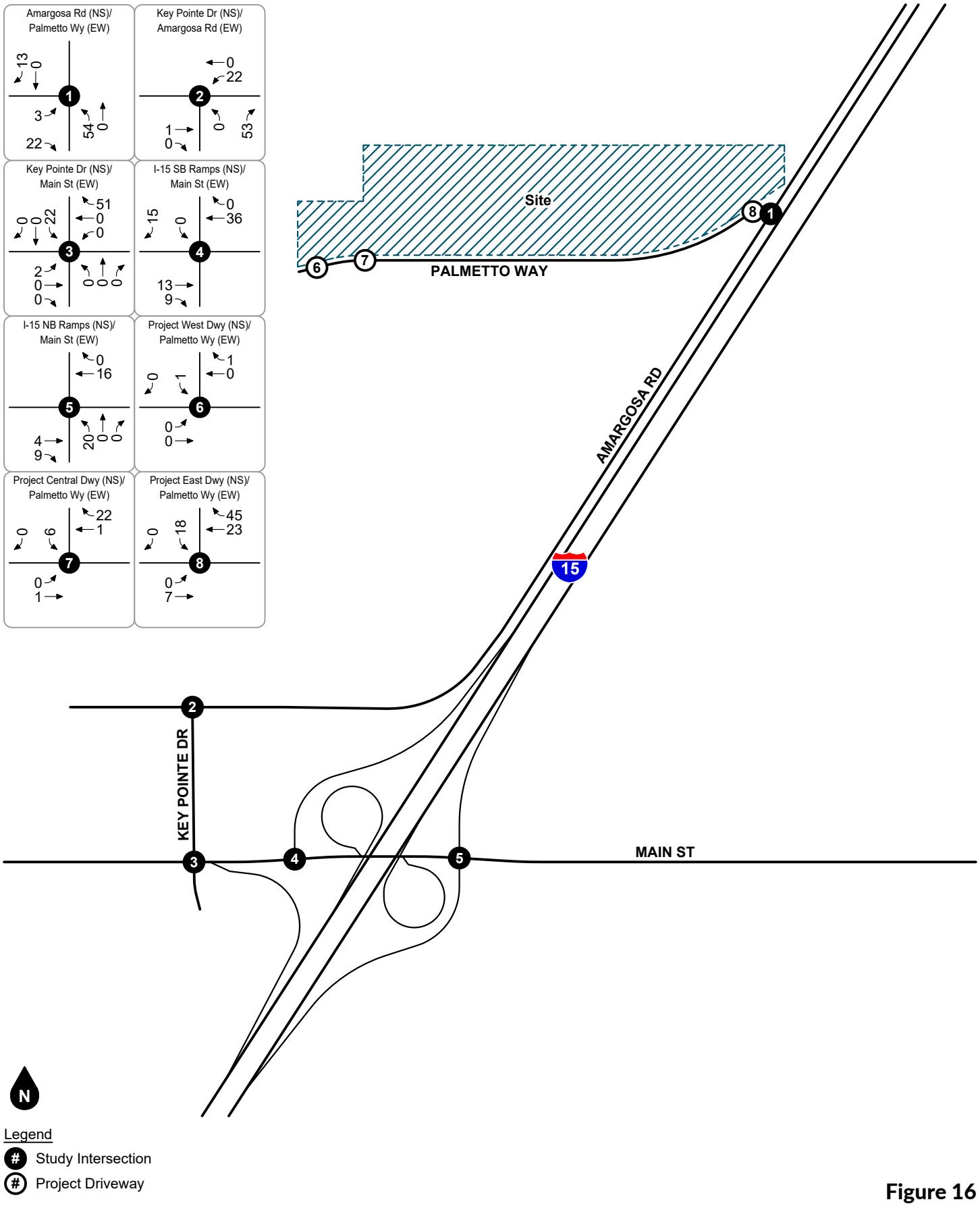


Figure 16
Project AM Peak Hour Intersection Turning Movement Volumes

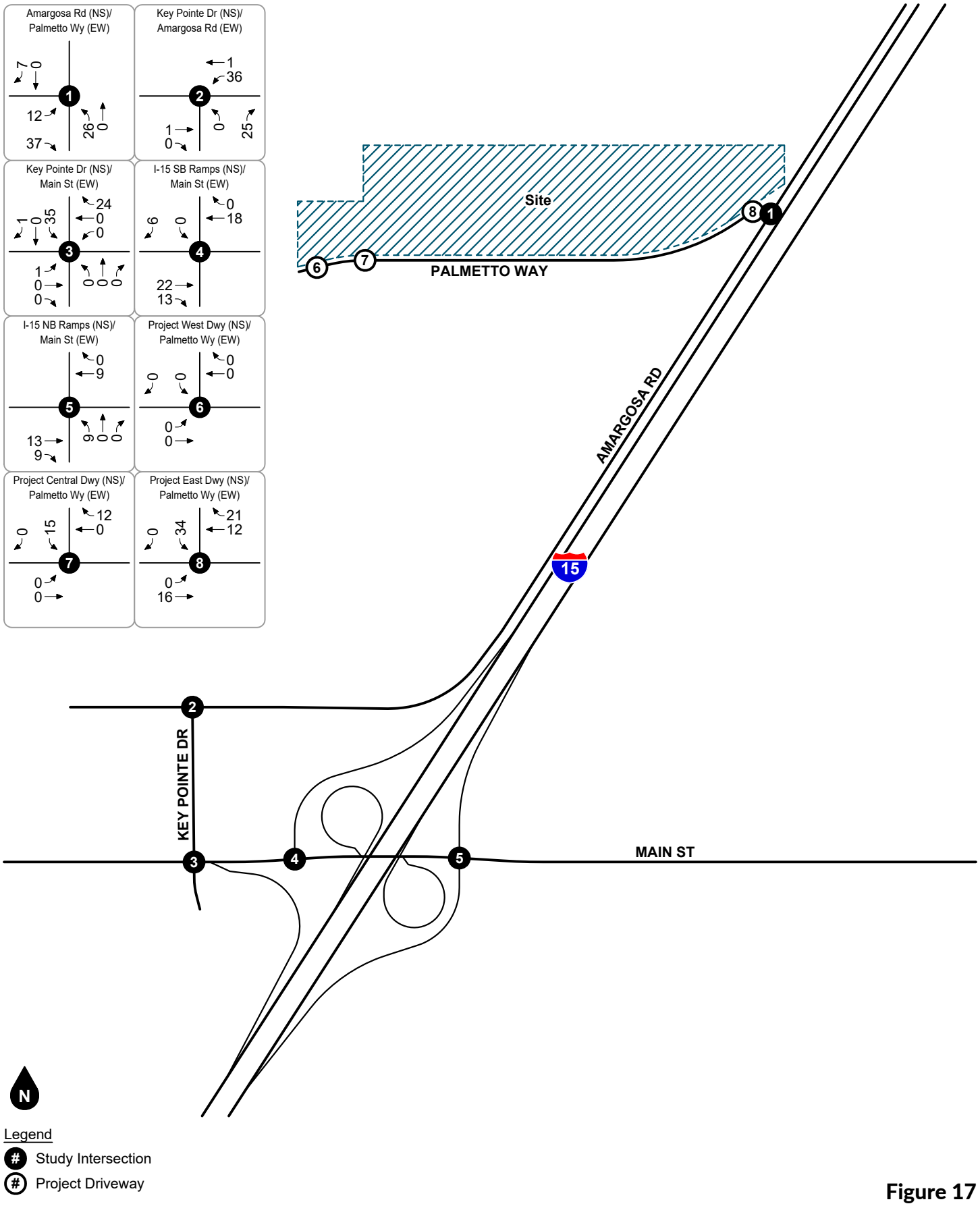


Figure 17
Project PM Peak Hour Intersection Turning Movement Volumes

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

CUMULATIVE TRIPS

Ambient Growth Rate

To account for ambient growth on roadways, existing 2022 volumes were increased by a growth rate of two percent (2%) per year over five years for Opening Year (2027) conditions; this equates to a total growth factor of approximately 1.104. The ambient growth rate was conservatively applied to all movements at the study intersections.

Other Development

To account for trips generated by future development, trips generated by pending or approved other development projects were added to the study area. Table 5 shows the other development project list for projects anticipated to contribute appreciable trips to the study area intersections and Figure 18 shows the other development location map.

Figure 19 and Figure 20 show the forecast AM and PM peak hour intersection turning movement volumes for trips generated by other developments.

GENERAL PLAN BUILDOUT (2040) PROJECTIONS

General Plan Buildout (2040) forecasts have been determined using a growth increment approach with the San Bernardino Transportation Analysis Model (SBTAM) Year 2016 and Year 2040 travel demand model plots. This difference defines the incremental growth in forecast volumes over the 24-year period between 2016 and 2040. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between the current year traffic counts (2022) and year 2040. For this purpose, linear growth between the Year 2016 base condition and the forecast Year 2040 condition was assumed. Since the increment between the current year and Year 2040 is 18 years of the 24-year time frame, a factor of 0.75 (i.e., 18/24) was used.

To derive AM and PM peak hour intersection turning movement volumes, the roadway link growth forecasts were further refined using a spreadsheet program developed by the Federal Highway Administration and consistent with forecasting procedures outlined in the National Cooperative Highway Research Program Report 255. The spreadsheet program uses a linear programming algorithm to calculate future turning movements based on the relationship of existing intersection turning movements and forecast model growth. The forecast turning movements developed by the spreadsheet program were reviewed for reasonableness and adjusted as necessary to ensure no less than 10 percent traffic growth. The end results of the post-processing procedures are future traffic volumes suitable for analysis. Travel demand model plots are provided in Appendix F and post-processing worksheets are provided in Appendix G.

ANALYSIS SCENARIO VOLUME FORECASTS

Opening Year (2027) Without Project

To develop Opening Year (2027) Without Project volume forecasts, existing volumes were combined with ambient growth and trips generated by other developments. Opening Year (2027) Without Project AM and PM peak hour intersection turning movement volumes are shown Figure 21 and Figure 22.

Opening Year (2027) With Project

Opening Year (2027) With Project volume forecasts were developed by adding project generated trips to the Opening Year (2027) Without Project forecast. Opening Year (2027) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 23 and Figure 24.

General Plan Buildout (2040) Without Project

General Plan Buildout (2040) Without Project volume forecasts were developed based on the SBTAM travel demand model and post-processing procedures as described above. General Plan Buildout (2040) Without Project AM and PM peak hour intersection turning movement volumes are shown on Figure 25 and Figure 26.

General Plan Buildout (2040) With Project

General Plan Buildout (2040) With Project volumes were developed by adding project generated trips to the General Plan Buildout (2040) Without Project forecast volumes. General Plan Buildout (2040) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 27 and Figure 28.

Table 3 (1 of 2)
Other Development Trip Generation

Project Name	Land Use	Quantity	Trips Generated[2]						
			AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	Daily
CUP23-00008	Fulfillment Center Warehouse	469.979 TSF							
	- Passenger Cars		49	12	61	28	43	71	743
	- Trucks (in PCE)		13	13	26	3	3	6	277
	Subtotal		62	25	87	31	46	77	1,020
Kiss Logistics Center	Fulfillment Center Warehouse	655.468 TSF							
(CUP22-00017)	- Passenger Cars		69	16	85	39	60	99	1,036
	- Trucks (in PCE)		16	16	32	10	10	20	382
	Subtotal		85	32	117	49	70	119	1,418
Hesperia Commerce Center II	Fulfillment Center Warehouse	3,901.194 TSF							
(includes CUPR24-0001)	- Passenger Cars		410	98	508	230	359	589	6,164
	- Trucks (in PCE)		97	97	194	50	50	100	2,282
	Subtotal		507	195	702	280	409	689	8,446
CUP23-00005/Phelan 20	Fulfillment Center Warehouse	419.700 TSF							
	- Passenger Cars		44	10	54	25	39	64	663
	- Trucks (in PCE)		13	13	26	3	3	6	244
	Subtotal		57	23	80	28	42	70	907
Pixior	Fulfillment Center Warehouse	440.000 TSF							
(CUPR25-00001)	- Passenger Cars		46	11	57	26	40	66	695
	- Trucks (in PCE)		13	13	26	3	3	6	257
	Subtotal		59	24	83	29	43	72	952
CUP24-00005	Commercial Retail	167.664 TSF	87	54	141	273	297	570	6,205
Newcastle	Fulfillment Center Warehouse	400.000 TSF							
(CUP22-00004)	- Passenger Cars		42	10	52	24	37	61	632
	- Trucks (in PCE)		10	10	20	3	3	6	235
	Subtotal		52	20	72	27	40	67	867
Poplar 18 Industrial Park	Fulfillment Center Warehouse	414.700 TSF							
(CUP21-00010)	- Passenger Cars		44	10	54	24	38	62	655
	- Trucks (in PCE)		10	10	20	3	3	6	244
	Subtotal		54	20	74	27	41	68	899
I-15 Industrial Park Project	Fulfillment Center Warehouse	1,850.000 TSF							
(CUP21-00004)	- Passenger Cars		194	46	240	109	170	279	2,923
	- Trucks (in PCE)		47	47	94	25	25	50	1,081
	Subtotal		241	93	334	134	195	329	4,004
Industrial Center	Warehouse	74.924 TSF							
(CUP22-00016/CUP24-0003)	- Passenger Cars		9	3	12	3	8	11	83
	- Trucks (in PCE)		3	0	3	3	3	6	113
	Subtotal		12	3	15	6	11	17	196

Table 3 (2 of 2)
Other Development Trip Generation

Project Name	Land Use	Quantity	Trips Generated[2]						
			AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	Daily
SPR22-00017	Fulfillment Center Warehouse	142.634 TSF							
	- Passenger Cars		15	4	19	8	13	21	225
	- Trucks (in PCE)		3	3	6	0	0	0	85
	Subtotal		18	7	25	8	13	21	310
SPR24-00006	Fulfillment Center Warehouse	91.569 TSF							
	- Passenger Cars		10	2	12	5	8	13	145
	- Trucks (in PCE)		3	3	6	0	0	0	52
	Subtotal		13	5	18	5	8	13	197
Dara Industrial Project	Fulfillment Center Warehouse	750.000 TSF							
(CUP22-00003)	- Passenger Cars		79	19	98	44	69	113	1,185
	- Trucks (in PCE)		22	22	44	10	10	20	440
	Subtotal		101	41	142	54	79	133	1,625
CUP23-00007	Truck Parking	83 SP	7	1	8	1	6	7	59
SPR23-00024	Fulfillment Center Warehouse	150.000 TSF							
	- Passenger Cars		16	4	20	9	14	23	237
	- Trucks (in PCE)		3	3	6	0	0	0	89
	Subtotal		19	7	26	9	14	23	326
Hesperia Commerce Center	Fulfillment Center Warehouse	3,500.000 TSF							
(SPR23-00024)	- Passenger Cars		368	88	456	207	322	529	5,530
	- Trucks (in PCE)		88	88	176	47	47	94	2,048
	Subtotal		456	176	632	254	369	623	7,578
Total			1,830	726	2,556	1,215	1,683	2,898	35,009

Notes:
(1) TSF = Thousand Square Feet; SU = Storage Units

(2) Based on trip generation rates from:
ITE = Institute of Transportation Engineers Trip Generation Manual (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.
PCE = Passenger Car Equivalent

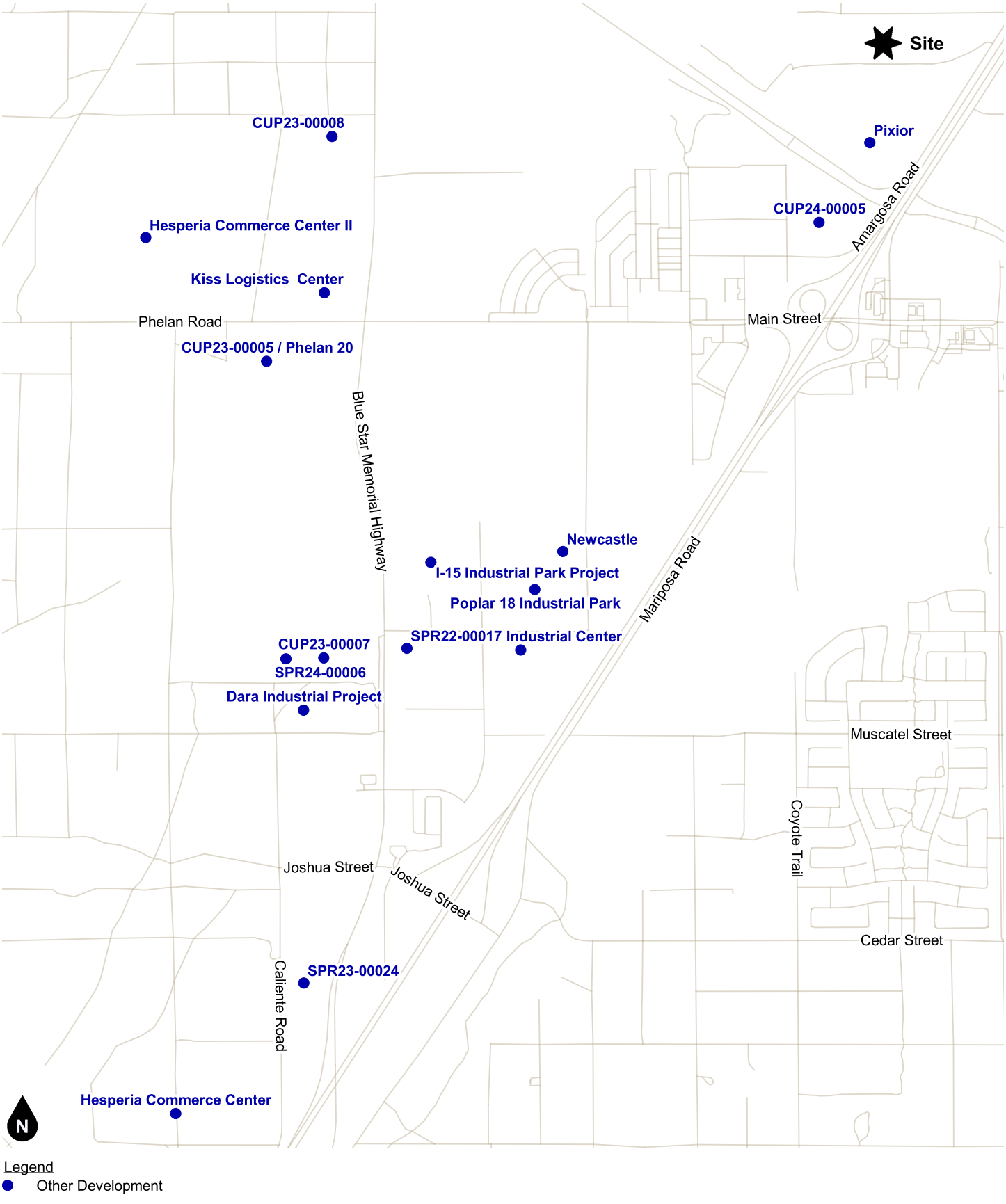


Figure 18
Other Development Location Map

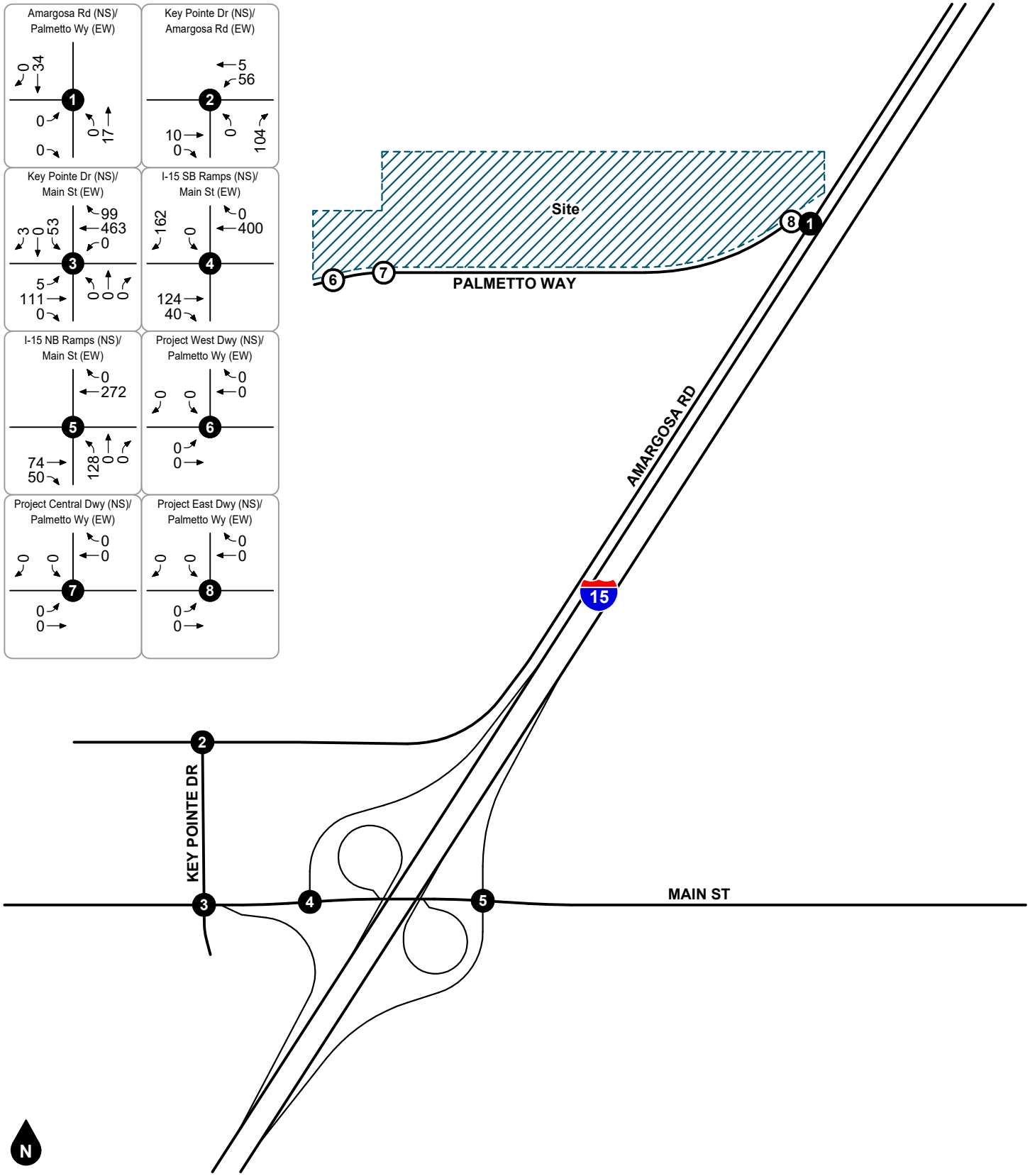


Figure 19
Other Development
AM Peak Hour Intersection Turning Movement Volumes

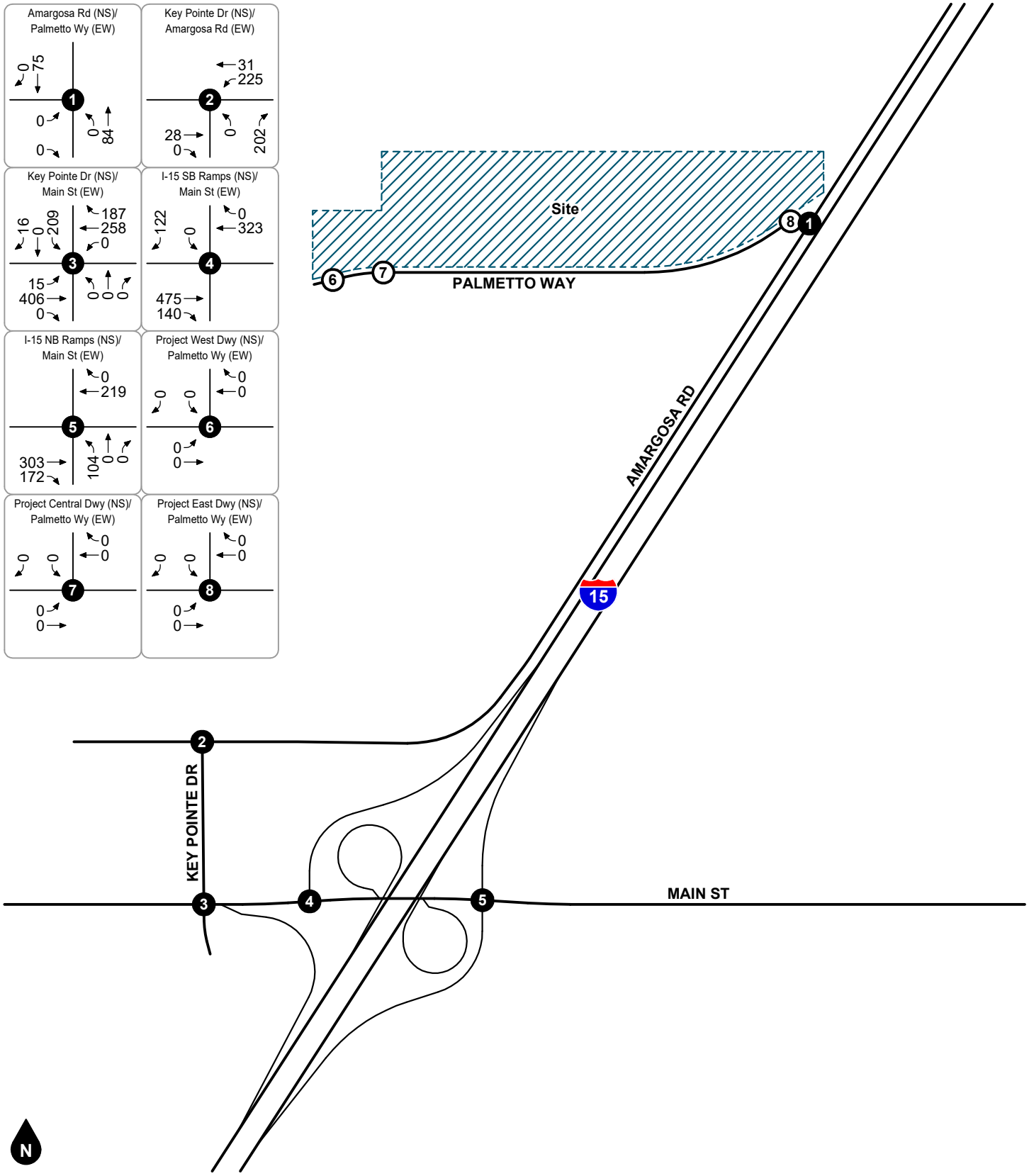


Figure 20
Other Development
PM Peak Hour Intersection Turning Movement Volumes

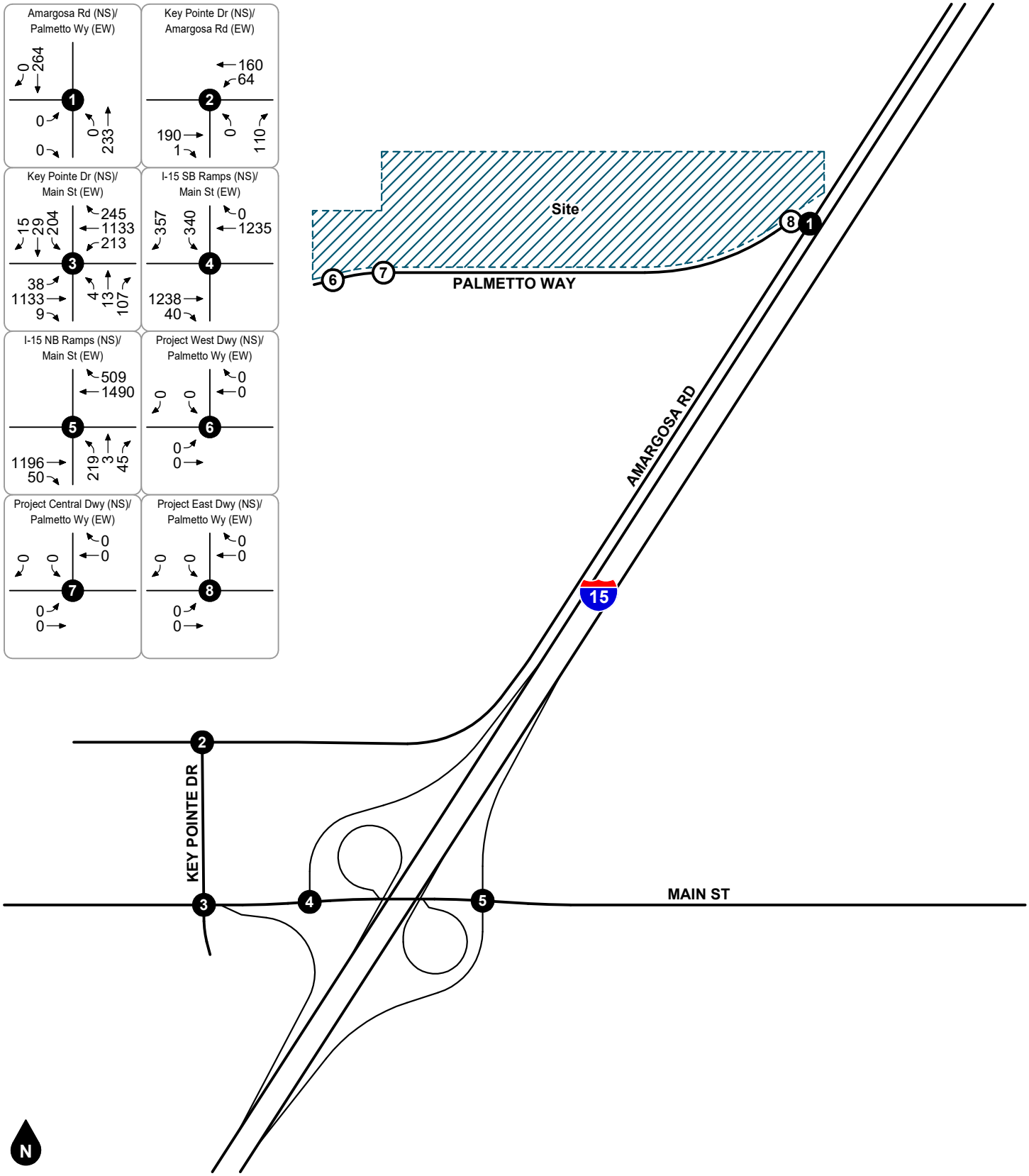


Figure 21
Opening Year (2027) Without Project
AM Peak Hour Intersection Turning Movement Volumes

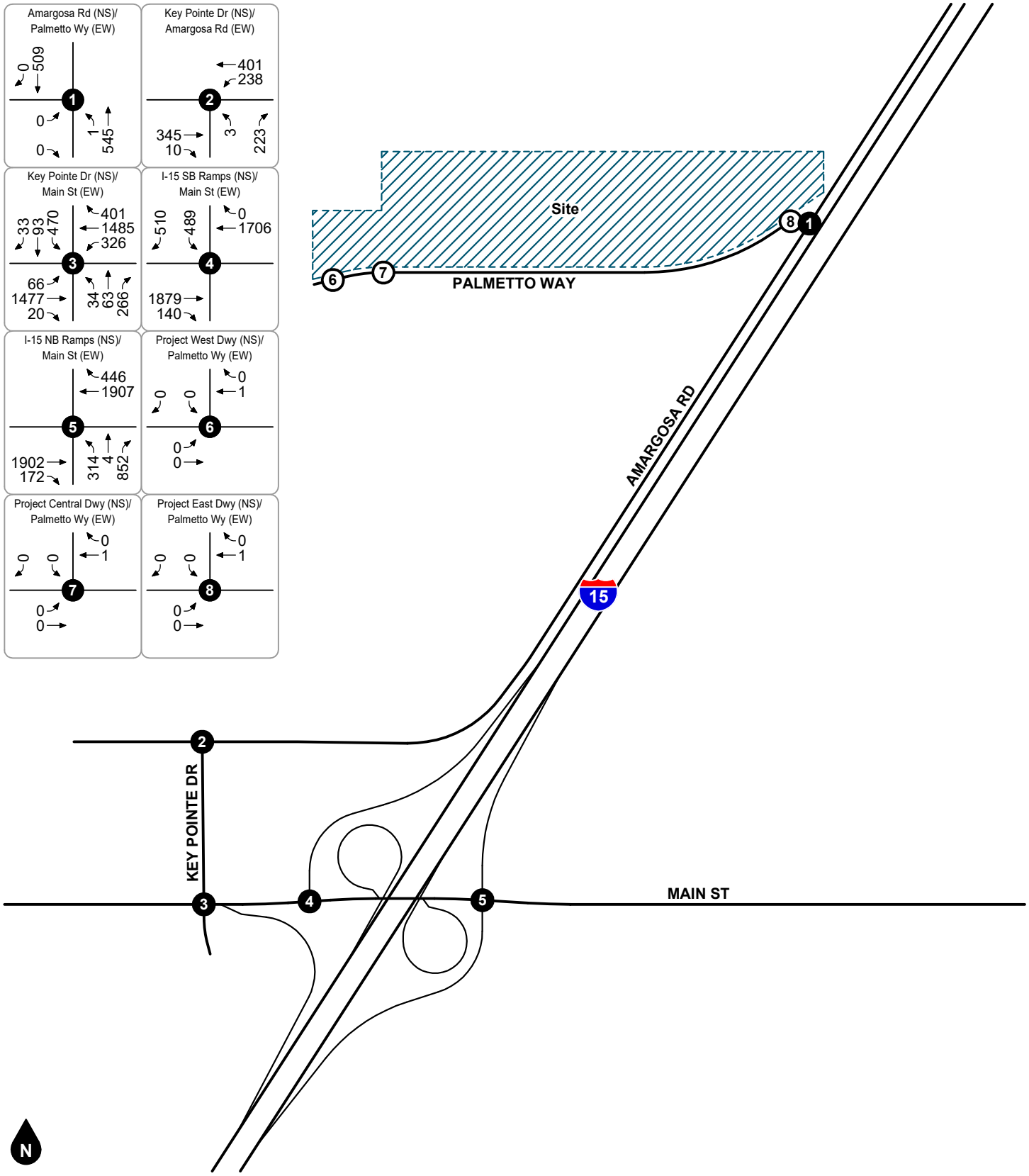
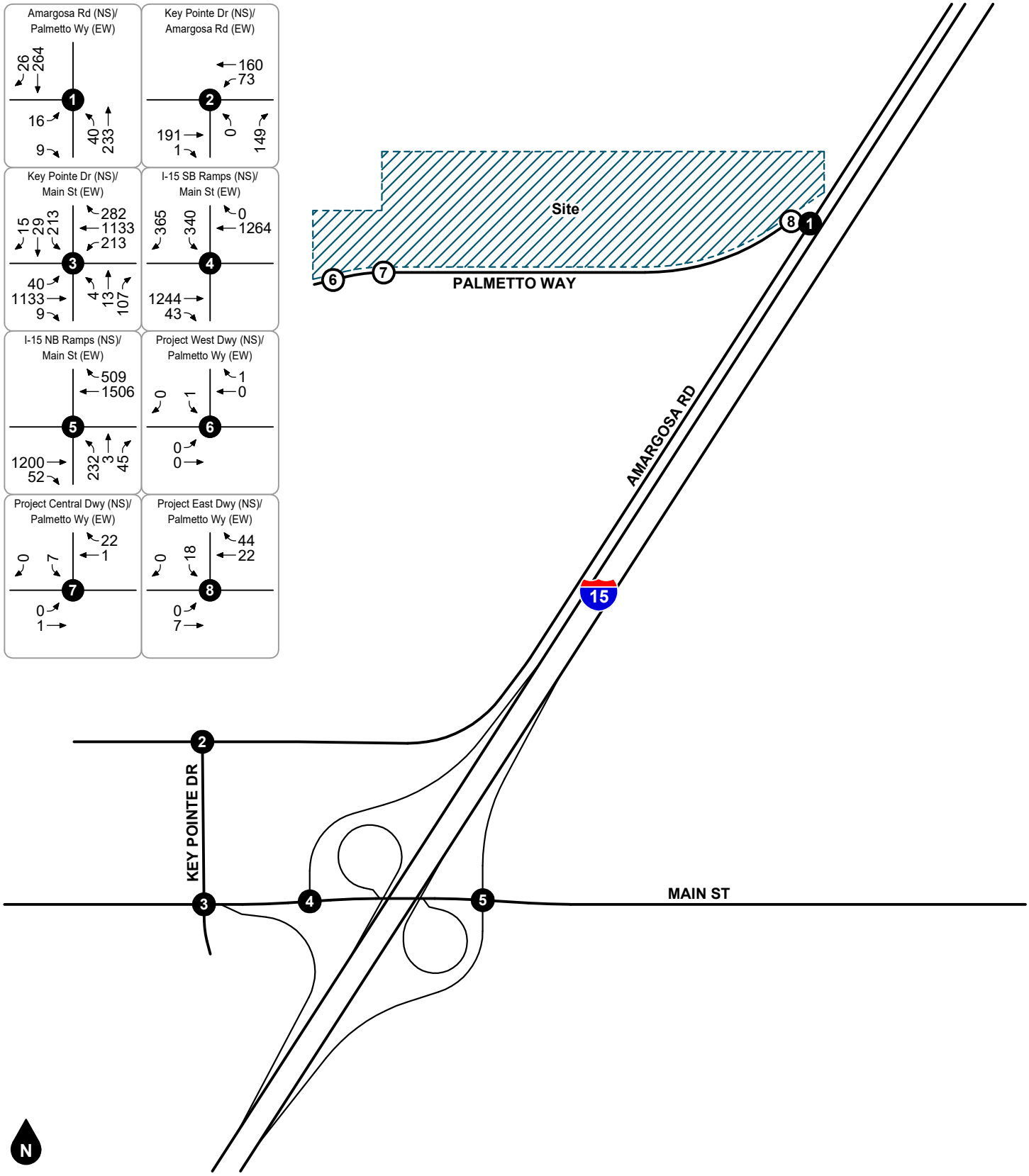


Figure 22
Opening Year (2027) Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

(#) Project Driveway

Figure 23
Opening Year (2027) With Project
AM Peak Hour Intersection Turning Movement Volumes

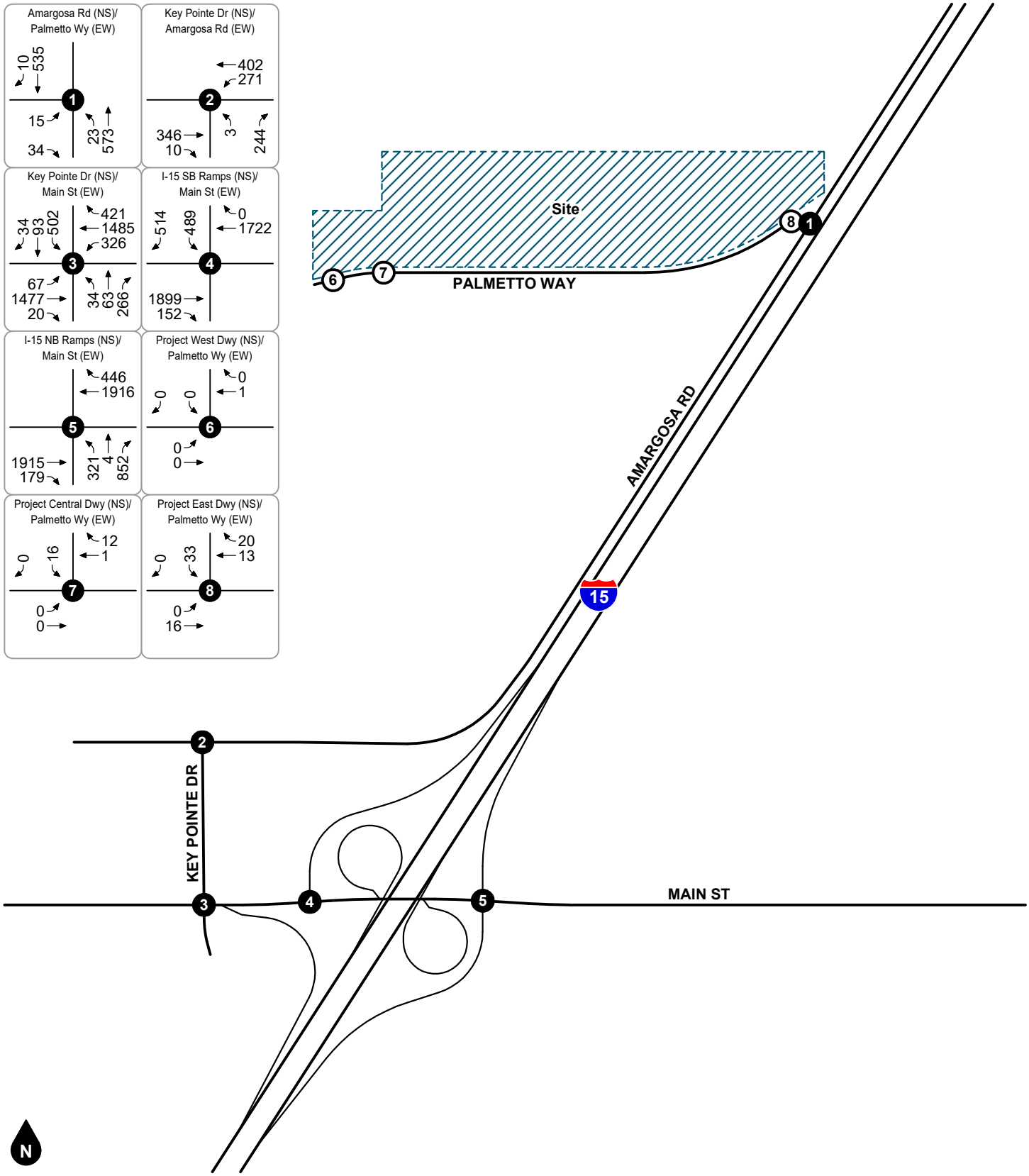
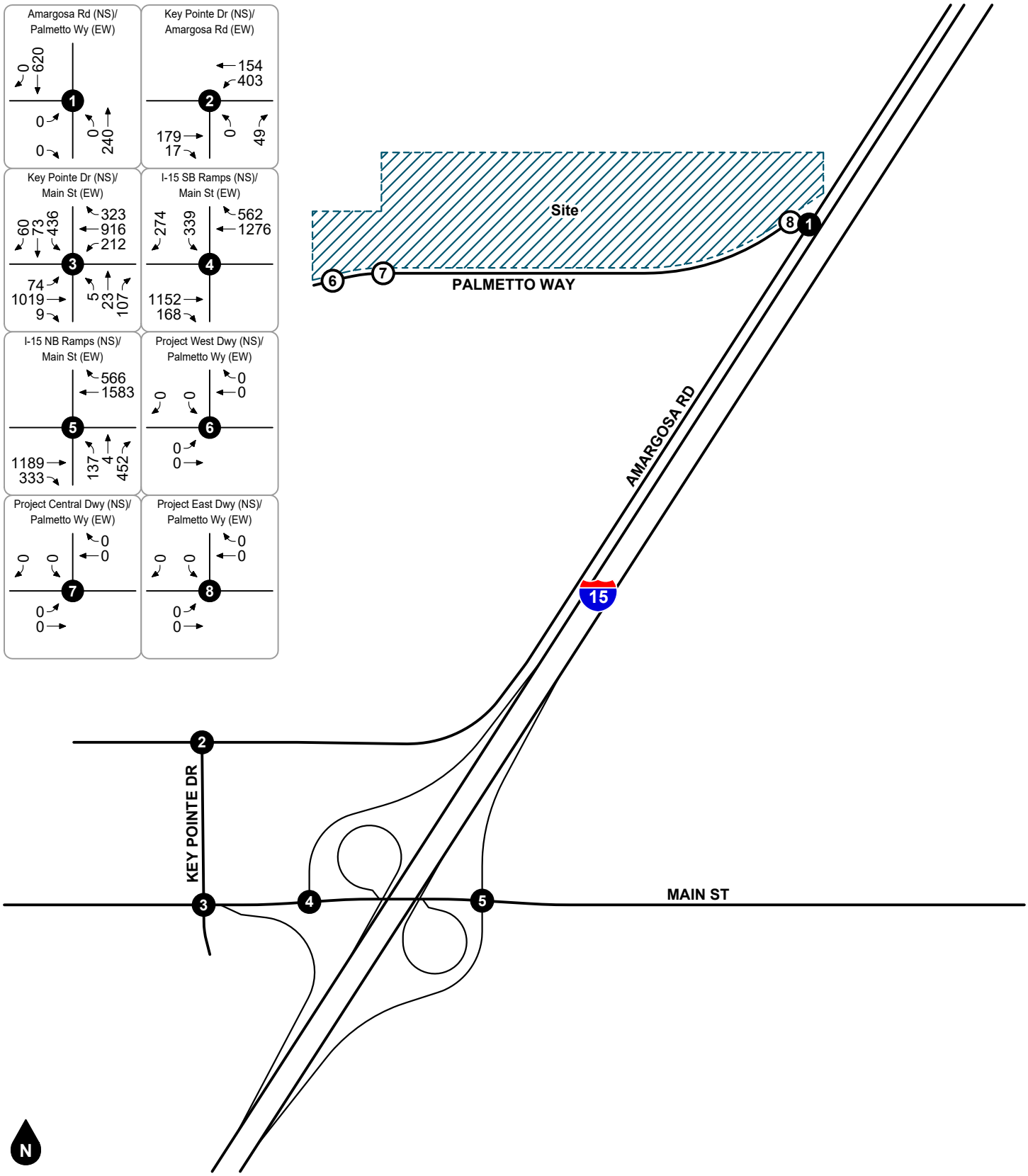


Figure 24
Opening Year (2027) With Project
PM Peak Hour Intersection Turning Movement Volumes

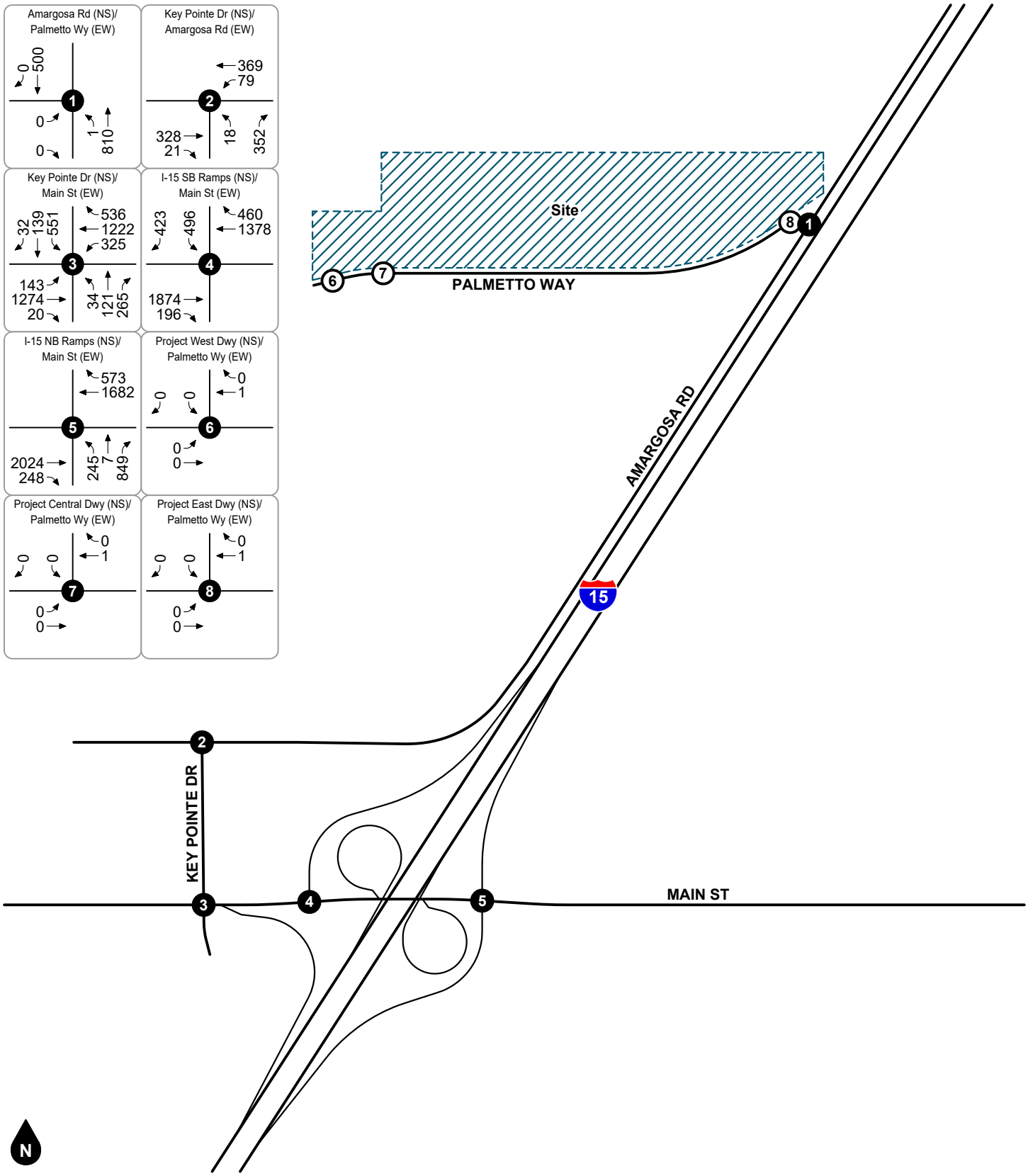


Legend

(#) Study Intersection

(#) Project Driveway

Figure 25
General Plan Buildout (2040) Without Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

(#) Project Driveway

Figure 26
General Plan Buildout (2040) Without Project
PM Peak Hour Intersection Turning Movement Volumes

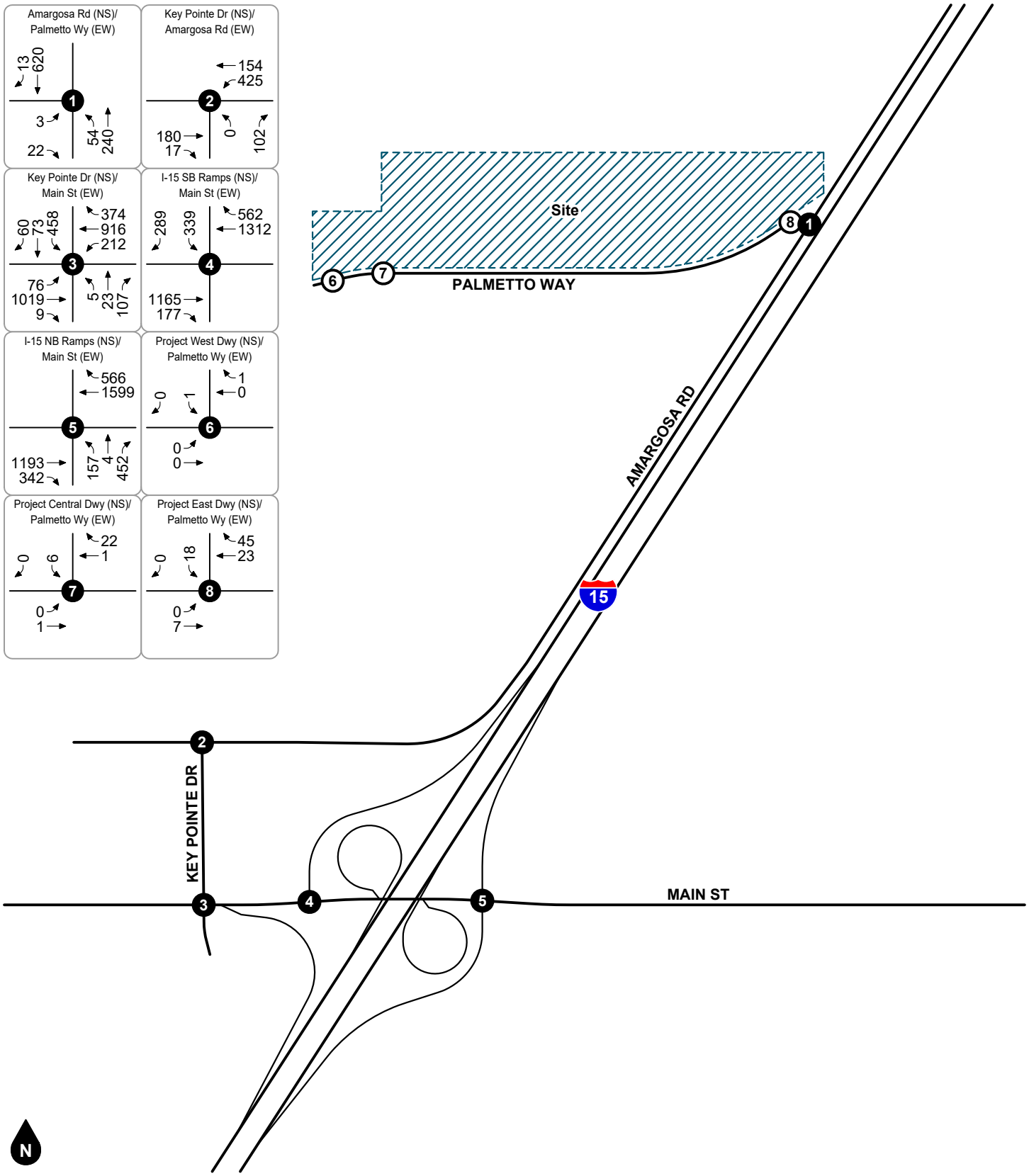
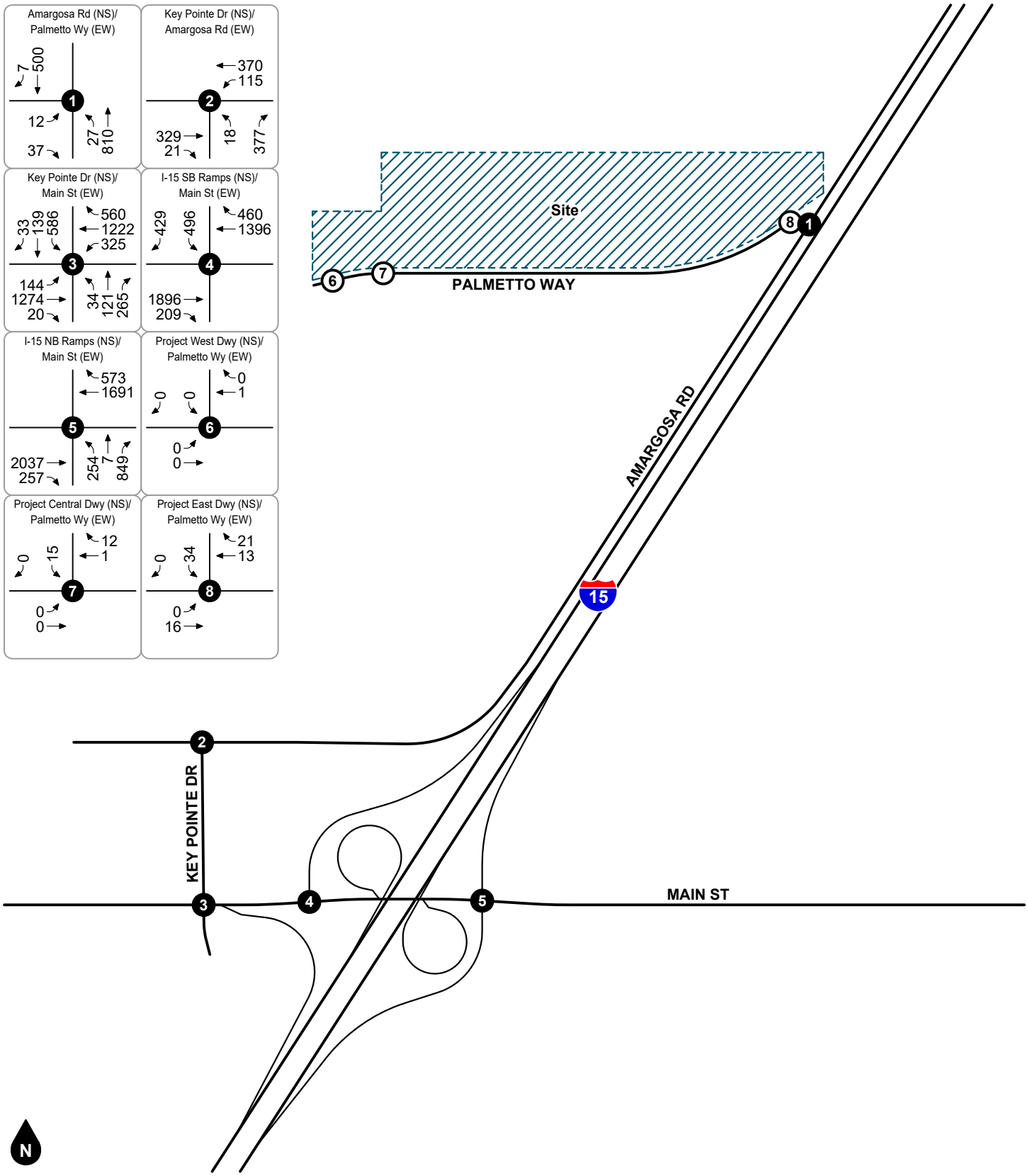


Figure 27
General Plan Buildout (2040) With Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

(#) Project Driveway

Figure 28
General Plan Buildout (2040) With Project
PM Peak Hour Intersection Turning Movement Volumes

6. FUTURE OPERATIONAL ANALYSIS

Detailed intersection Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix D.

OPENING YEAR (2027) WITHOUT PROJECT

The intersection Levels of Service for Opening Year (2027) Without Project conditions are shown in Table 6. As shown in Table 6, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

OPENING YEAR (2027) WITH PROJECT

The intersection Levels of Service for Opening Year (2027) With Project conditions are shown in Table 7. As shown in Table 7, the study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT

The intersection Levels of Service for General Plan Buildout (2040) Without Project conditions are shown in Table 8. As shown in Table 8, the study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

GENERAL PLAN BUILDOUT (2040) WITH PROJECT

The intersection Levels of Service for General Plan Buildout (2040) With Project conditions are shown in Table 9. As shown in Table 9, the study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

A conceptual striping exhibit for the improvement of a second southbound left turn lane at the intersection of Key Pointe Drive at Main Street (Int. #3) is shown on Figure 29.

The traffic signal would require modification from north-south permitted phasing to protected phasing.

PROJECT FAIR SHARE CONTRIBUTION

Table 10 shows the project fair share contributions and summary of improvements recommended for cumulative conditions. The project fair share contribution is based on the proportion of project peak hour intersection turning movement volumes contributed to the improvement location relative to the total new peak hour intersection turning movement volumes. The intersection fair share cost calculations are typically based on the higher of the AM or PM peak hour traffic volumes. The fair share calculations are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

Note that the existing turning movement volumes are based on the year 2022 traffic counts to most accurately reflect the change in volumes from when existing traffic counts were taken compared to forecasted General Plan Buildout forecast volumes.

Table 6
Opening Year (2027) Without Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	11.0	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	17.1	B	86.1	F
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	10.4	B	15.6	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	6.0	A	14.4	B

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 7
Opening Year (2027) With Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	12.1	B	16.3	C
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.5	A	11.2	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	17.5	B	111.0	F
- With Improvements	TS	14.6	B	31.8	C
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	10.6	B	15.9	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	6.3	A	14.5	B
6. Project West Driveway (NS) at Palmetto Way (EW)	CSS	8.5	A	0.0	A
7. Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8. Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 8
General Plan Buildout (2040) Without Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	0.0	A	0.0	A
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.0	A	12.5	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	24.9	C	160.2	F
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	8.8	A	12.2	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	8.1	A	13.5	B

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 9
General Plan Buildout (2040) With Project Intersection Levels of Service

Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
		Delay[2]	LOS[3]	Delay[2]	LOS[3]
1. Amargosa Road (NS) at Palmetto Way (EW)	CSS	13.6	B	17.1	C
2. Key Pointe Drive (NS) at Amargosa Road (EW)	CSS	9.3	A	12.9	B
3. Key Pointe Drive (NS) at Main Street (EW)	TS	25.6	C	189.5	F
- With Improvements	TS	26.4	C	50.1	D
4. I-15 SB Offramp (NS) at Main Street (EW)	TS	9.0	A	12.3	B
5. I-15 NB Ramps (NS) at Main Street (EW)	TS	8.2	A	13.6	B
6. Project West Driveway (NS) at Palmetto Way (EW)	CSS	8.5	A	0.0	A
7. Project Central Driveway (NS) at Palmetto Way (EW)	CSS	8.6	A	8.6	A
8. Project East Driveway (NS) at Palmetto Way (EW)	CSS	8.8	A	8.8	A

Notes:

(1) CSS = Cross Street Stop; TS = Traffic Signal

(2) Delay is shown in seconds/vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual approach.

(3) LOS = Level of Service

Table 10
Project Fair Share Contribution

Study Intersection	Peak Hour	Intersection Turning Movement Volumes				
		Existing	General Plan Buildout With Project	Project Trips	Total New Trips	Project Share of Total New Trips
3. Key Pointe Drive (NS) at Main Street (EW)	AM	2,083	3,332	75	1,249	6.0%
	PM	3,298	4,723	61	1,425	4.3%

Study Intersection	Improvement
3. Key Pointe Drive (NS) at Main Street (EW)	Construct a second SB left turn lane.



Note: Proof of concept only; not for construction. Final plans shall conform with all applicable CA MUTCD requirements.

Figure 29
Conceptual Striping Plan

7. SITE ACCESS AND CIRCULATION

This section includes a description of project improvements necessary to provide site access and an evaluation of site access and circulation.

PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project as project design features to provide project site access:

- Construct Avenal Street at its ultimate half-section width from the project west terminus to Amargosa Way including landscaping and parkway improvements in conjunction with development, as necessary.

- Construct Palmetto Way at its ultimate half-section width from the project west terminus to Amargosa Way including landscaping and parkway improvements in conjunction with development, as necessary.

- Construct Project West Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:

    - Southbound: one shared left/right turn lane
    - Eastbound: one shared left/through lane
    - Westbound: one shared through/right turn lane

- Construct Project Central Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:

    - Southbound: one shared left/right turn lane
    - Eastbound: one shared left/through lane
    - Westbound: one shared through/right turn lane

- Construct Project East Driveway (NS) at Palmetto Way (EW) to provide one inbound lane and one outbound lane with north-south stop control and the following lane configurations:

    - Southbound: one shared left/right turn lane
    - Eastbound: one shared left/through lane
    - Westbound: one shared through/right turn lane

This analysis also assumes the project shall comply with the following conditions as part of the City of Hesperia standard development review process:

- A construction work site traffic control plan shall comply with State standards set forth in the California Manual of Uniform Traffic Control Devices and shall be submitted to the City for review and approval prior to the issuance of a grading permit or start of construction. The plan shall identify any roadway, sidewalk, bike route, or bus stop closures and detours as well as haul routes and hours of operation. All construction related trips shall be restricted to off-peak hours to the extent possible.

- All on-site and off-site roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project shall be constructed in accordance with applicable State/Federal engineering standards and to the satisfaction of the City of Hesperia.

- Site-adjacent roadways shall be constructed or repaired at their ultimate half-section width, including landscaping and parkway improvements in conjunction with development, or as otherwise required by the City of Hesperia.

- Adequate off-street parking shall be provided to the satisfaction of City of Hesperia.

- Adequate emergency vehicle access shall be provided to the satisfaction of the Hesperia Fire Department.

- The final grading, landscaping, and street improvement plans shall demonstrate that sight distance requirements are met in accordance with applicable City of Hesperia/California Department of Transportation sight distance standards.

8. VEHICLES MILES TRAVELED

BACKGROUND

California Senate Bill 743 (SB 743) directed the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The City of Hesperia has established VMT analysis guidelines at this time; therefore, the project-related VMT impact has been assessed based on guidance from the City of Hesperia *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (July 2020).

SCREENING ASSESSMENT

The City of Hesperia TIA Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory, or projects that are local serving and thus, by definition, reduce VMT by decreasing the number or distance of trips.

The City of Hesperia TIA Guidelines provide the following three screening steps: 1) Transit Priority Area (TPA) Screening; 2) Low VMT Area Screening; and 3) Project Type Screening.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ration (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City Traffic Engineer, with input from the Metropolitan Planning Organization): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool was used to determine if the project is located within a TPA. Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a TPA; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

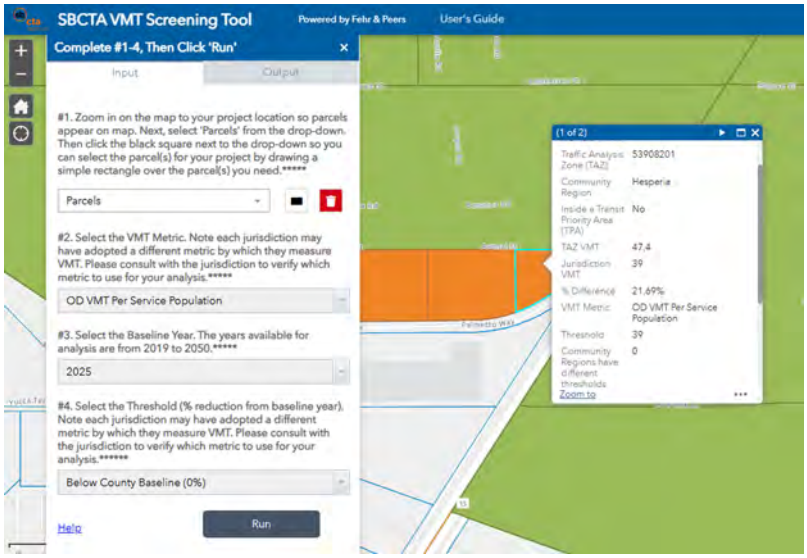
Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

The SBCTA VMT Screening Tool was used assess low VMT area screening for the project. The SBCTA VMT Screening Tool was developed using the SBTAM travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify if a project is in a low VMT-generating area, the appropriate baseline TAZ VMT is compared to the current County of San Bernardino VMT threshold of 39.0 VMT per service population. Additionally, as noted above, the City directs the analyst to identify if the project is consistent with the existing land use within that TAZ and use professional judgement that there is nothing unique about the project that would otherwise be mis-represented utilizing the data from the travel demand model

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 47.4 using OD VMT per service population in the baseline year (2025) compared to the County of San Bernardino VMT threshold of 39.0 OD VMT per service population (+21.69% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria. Attachment A shows the SBCTA VMT Screening Tool results.



Attachment A: SBCTA VMT Screening Tool – OD VMT Per Service Population

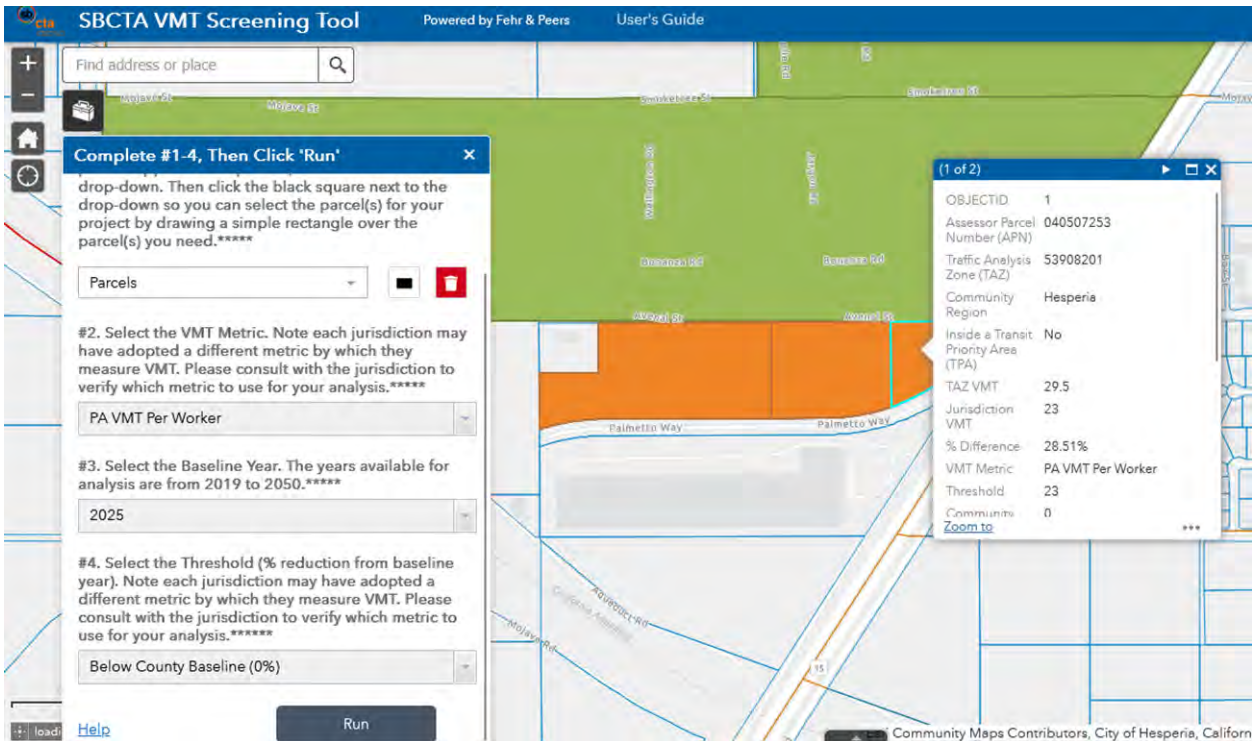
City guidelines state that "In some cases, it may be appropriate to extract the Project-generated VMT using the production-attraction trip matrix. This may be appropriate when a project is entirely composed of retail or office uses, and there is a need to isolate the home-based work (HBW) VMT for purposes of isolating commute VMT. The City should evaluate the appropriate methodology based on the project land use types and context."

The San Bernardino County *Transportation Impact Study Guidelines* (July 2019) states under Section 4.1 (CEQA Assessment – VMT Analysis: Analysis Methodology), "Consistent with OPR guidelines, the following specific components will be utilized to complete a VMT impact assessment:

- Employment Projects – VMT/Employee for only the home-based work trip purpose (attractions) and would apply to office, industrial, governmental, and institutional projects."

The project consists solely of industrial land use. Therefore, all trips to/from the project site are work-based trips and it is appropriate to analyze the project site using the production-attraction trip matrix for VMT per worker, since VMT per worker measures the average (mean) distance a worker drives to work by vehicle in a given period of time.

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 29.5 using PA VMT per worker in the baseline year (2025) compared to the County of San Bernardino VMT average of 23.0 PA VMT per worker (+28.51% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria. Attachment B shows the SBCTA VMT Screening Tool results.



Attachment B: SBCTA VMT Screening Tool – PA VMT Per Worker

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

The following additional uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local serving K-12 schools
- Local parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g. non-destination hotels)
- Local-serving medical
- Student housing projects on or adjacent to college campuses
- Local serving assembly uses (places of worship, community organizations)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects generating less than 110 daily vehicle trips. This generally corresponds to the following "typical" development potentials:
  - 11 single family housing units
  - 16 multi-family, condominiums, or townhouse housing units
  - 10,000 square feet of office
  - 15,000 square feet of light industrial
  - 63,000 square feet of warehousing
  - 79,000 square feet of high-cube transload and short-term storage warehouse

Based on review of project type screening, the proposed project is greater than 63,000 square feet of warehousing; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Screening Assessment Finding

The proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

9. CONCLUSIONS

This section summarizes the findings from the previous sections of this report.

PROJECT TRIP GENERATION

The proposed project is forecast to generate 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

LEVELS OF SERVICE

The study intersections currently operate within acceptable Levels of Service during the peak hours for Existing conditions.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for Opening Year (2027) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for Opening Year (2027) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for Opening Year (2027) With Project conditions with implementation of the recommended improvements.

The study intersections are forecast to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) Without Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The study intersections are projected to operate within acceptable Levels of Service (D or better) during the peak hours for General Plan Buildout (2040) With Project conditions, except for the following study intersection which is projected to operate at an unacceptable Level of Service (E or F) during the PM peak hour:

- Key Pointe Drive (NS) at Main Street (EW) - #3 (PM Peak Hour – LOS F)

The following improvements are recommended for General Plan Buildout (2040) With Project conditions to maintain acceptable Level of Service:

- Key Pointe Drive (NS) at Main Street (EW) - #3
  - Construct a second southbound left turn lane.

The proposed project is forecast to result in no substantial operational deficiencies at the study intersections for General Plan Buildout (2040) With Project conditions with implementation of the recommended improvements.

VMT ANALYSIS

Based on review of the SBCTA VMT Screening Tool, the proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

APPENDICES

Appendix A Glossary
Appendix B Scoping Agreement
Appendix C Volume Count Worksheets
Appendix D Trip Generation Comparison Analysis
Appendix E Level of Service Worksheets
Appendix F SBTAM Model Plots
Appendix G Post-Processing Worksheets

APPENDIX A

GLOSSARY

GLOSSARY OF TERMS

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CONTROL DELAY: The component of delay, typically expressed in seconds per vehicle, resulting from the type of traffic control at an intersection. Control delay is measured by comparison with the uncontrolled condition; it includes delay incurred by slowing down, stopping/waiting, and speeding up.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic travelling at a given speed to radically alter their speed or trajectory. Corner sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 36 inches above the pavement in the center of the nearest approach lane.

CYCLE LENGTH: The time period in seconds required for a traffic signal to complete one full cycle of indications.

CUL-DE-SAC: A local street open at one end only and with special provisions for turning around.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

PASSENGER CAR EQUIVALENT (PCE): A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SHARED/RECIPROCAL PARKING AGREEMENT: A written binding document executed between property owners to provide a designated number of off-street parking stalls within a designated area to be available for specified businesses or land uses.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queueing to occur.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle on the major roadway travelling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 6 inches above the pavement.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination (i.e., each trip has two trip-ends). A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheel base as well as the steering mechanism of the vehicle.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

SCOPING AGREEMENT

Recommended Approval: TKE 06/24/22
Comments on Site Plan excepted

transportation ▪ noise ▪ air quality | **GANDDINI GROUP**

MEMORANDUM OF UNDERSTANDING

TO: CITY OF HESPERIA

FROM: Bryan Crawford, Senior Transportation Planner | GANDDINI GROUP, INC.

DATE: May 23, 2022

SUBJECT: Amargosa and Palmetto High-Cube Warehouse Traffic Impact Analysis Scoping

INTRODUCTION

The purpose of this traffic study scoping document is to outline the proposed traffic analysis parameters and assumptions for review/concurrence by City of Hesperia staff.

PROJECT DESCRIPTION

Figure 1 shows the project location map. The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, as exhibited in Figure 2.

The site plan is show in Appendix A. The 30.52-acre project site is proposed to include a 545,000 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024.

The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 505,665 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE Trip Generation Manual and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD). As shown in Table 1, the proposed project is forecast to generate approximately 1,179 daily PCE trips, including 97 PCE trips during the AM peak hour and 102 PCE trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION

Figure 3 to Figure 6 illustrate the forecast outbound and inbound directional distribution patterns of project-generated truck trips and passenger car trips.

STUDY AREA

Based on the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020) guidelines, intersections identified for analysis typically include signalized intersections at which a project is forecast to contribute 50 or more trips during the AM or PM peak hours. The study area is proposed to consist of the following eight (8) study intersections, even if the project may not contribute 50 or more trips during either peak hour.

Study Intersections (Figure 1)

1. Amargosa Road (NS) at Palmetto Way (EW)
2. Key Pointe Drive (NS) at Amargosa Road (EW)
3. Key Pointe Drive (NS) at Main Street (EW)
4. I-15 SB Offramp (NS) at Main Street (EW)
5. I-15 NB Ramps (NS) at Main Street (EW)
6. Project West Driveway (NS) at Palmetto Way (EW)
7. Project Central Driveway (NS) at Palmetto Way (EW)
8. Project East Driveway (NS) at Palmetto Way (EW)

TRAFFIC COUNTS

Intersection turning movement counts will be used at the study intersections during the AM peak period (7:00 AM – 9:00 AM) and PM peak period (4:00 PM – 6:00 PM) on a typical weekday (Tuesday, Wednesday, or Thursday).

ANALYSIS SCENARIOS

The traffic study shall evaluate the following analysis scenarios for weekday AM and PM peak hour conditions:

- Existing [2022]
- Opening Year Without Project [2024]
- Opening Year With Project [2024]
- General Plan Buildout Without Project [2040]
- General Plan Buildout With Project [2040]

ANALYSIS METHODOLOGY

To assess the performance of an intersection, the [Manager] uses the intersection delay method based on procedures contained in the Highway Capacity Manual (Transportation Research Board, 6th Edition). The methodology considers the traffic volume and distribution of movements, traffic composition, geometric characteristics, and signalization details to calculate the average control delay per vehicle and corresponding Level of Service (LOS). Control delay is defined as the portion of delay attributed to the intersection traffic control (such as a traffic signal or stop sign) and includes initial deceleration, queue move-up time, stopped delay, and final acceleration delay. The intersection control delay is then correlated to Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

Intersection Level of Service analysis shall be performed using the Vistro software.

PERFORMANCE STANDARDS

City of Hesperia

The City of Hesperia has established LOS D as the minimum acceptable Level of Service along all City maintained roads (including intersections).

OPERATIONAL THRESHOLDS

City of Hesperia

For study intersections within the City of Hesperia jurisdiction, a traffic impact occurs if:

- The addition of peak hour project generated trips is forecast to cause an intersection to deteriorate from acceptable Level of Service (D or better) to unacceptable Level of Service (E or F); or,

- The addition of peak hour project generated trips worsens the delay at an intersection operating at an unacceptable Level of Service (E or F) in the baseline condition.

If a project is forecast to cause an operational traffic impact, feasible improvements that will reduce the impact to an acceptable LOS are identified. Improvements can be in many forms, including the addition of lanes, traffic control modification, or demand management measures.

FORECASTING METHODOLOGY

Ambient Growth Rate

To account for area-wide ambient growth, the Opening Year 2024 will include a 2% annual growth for 2 years (total growth factor = 1.04) over the 2022 base volumes. City staff shall confirm that this growth rate is applicable and refine as necessary.

Other Cumulative Projects

A list of pending and approved cumulative development projects will be obtained from Cities of Hesperia and Victorville staff. This list will be narrowed down to include projects within a 1.5 mile radius of the project site.

Trip forecasts for other development projects within the project study area will be determined based on the Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition, 2021 and will be added to existing roadway volumes for the applicable analysis scenarios.

General Plan Buildout Volume Forecasts

Year 2040 traffic volume forecasts will be obtained from the current San Bernardino Transportation Analysis Model (SBTAM). Ganddini Group shall perform post-processing procedures to calculate the growth increment between the base year model volumes and the Year 2040 forecast model volumes to be added to current year traffic volumes. Weekday AM and PM peak hour link volumes shall be converted to turning movement volumes using the "b-turns" program. Year 2040 With Project conditions will be determined by manually adding project trips to the baseline Year 2040 forecast.

VEHICLES MILES TRAVELED (VMT) ANALYSIS

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. Agencies are required to apply the updated CEQA guidelines for VMT analysis and implementation was required State-wide by July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) ["Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

The City of Hesperia has established VMT analysis guidelines at this time; therefore, the project-related VMT impact has been assessed based on guidance from the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020).

VMT Screening Assessment

The project VMT impact has been assessed in accordance with guidance from the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (July 2020).

The City of Hesperia TIA Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on substantial evidence provided in the OPR Technical Advisory, or projects that are local serving and thus, by definition, reduce VMT by decreasing the number or distance of trips.

The City of Hesperia TIA Guidelines provide the following three screening steps: 1) Transit Priority Area (TPA) Screening; 2) Low VMT Area Screening; and 3) Project Type Screening.

Transit Priority Area (TPA) Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ration (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City Traffic Engineer, with input from the Metropolitan Planning Organization): or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool was used to determine if the project is located within a TPA. Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a TPA; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Low VMT Area Screening

Residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

The SBCTA VMT Screening Tool was used assess low VMT area screening for the project. The SBCTA VMT Screening Tool was developed using the SBTAM travel forecasting model to measure VMT performance for individual jurisdictions and for individual traffic analysis zones (TAZs) within the SBCTA region. TAZs are geographic polygons similar to census block groups used to represent areas of homogenous travel behavior. Total daily VMT per service population (population plus employment) was estimated for each TAZ. This presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify if a project is in a low VMT-generating area, the appropriate baseline TAZ VMT is compared to the current County of San Bernardino VMT threshold of 33.3 VMT per service population. Additionally, as noted above, the City directs the analyst to identify if the project is consistent with the existing land use within that

TAZ and use professional judgement that there is nothing unique about the project that would otherwise be mis-represented utilizing the data from the travel demand model

Based on review of the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 72.1 using OD VMT per service population in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 33.3 OD VMT per service population (116.32% difference); therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

However, City guidelines state that "In some cases, it may be appropriate to extract the Project-generated VMT using the production-attraction trip matrix. This may be appropriate when a project is entirely composed of retail or office uses, and there is a need to isolate the home-based work (HBW) VMT for purposes of isolating commute VMT. The City should evaluate the appropriate methodology based on the project land use types and context."

The San Bernardino County Transportation Impact Study Guidelines (July 9, 2019) states under Section 4.1 (CEQA Assessment – VMT Analysis: Analysis Methodology), "Consistent with OPR guidelines, the following specific components will be utilized to complete a VMT impact assessment:

- Employment Projects – VMT/Employee for only the home-based work trip purpose (attractions) and would apply to office, industrial, governmental, and institutional projects."

The project is an 100% industrial land use. Therefore, all trips to/from the project site are work-based trips. Therefore, it is appropriate to analyze the project site using the production-attraction trip matrix for VMT per worker, since VMT per worker measures the average (mean) distance a worker drives to work by vehicle in a given period of time.

Based on review of the SBCTA VMT Screening Tool, the proposed project is located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 13.3 using PA VMT per worker in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 16.9 PA VMT per worker (-21.6% difference); therefore, the proposed project can be presumed to result in a less than significant VMT impact under this screening criteria.

Although the City of Hesperia guidelines state that the appropriate baseline project TAZ OD VMT per service population should be compared to the baseline County of San Bernardino OD VMT per service population, Ganddini Group, Inc. recommends an exemption be applied to this project based on the project TAZ characteristics as identified, and guidance from San Bernardino County regarding the method for evaluating VMT for industrial projects.

Project Type Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment.

Local serving retail projects less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

The following additional uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local serving K-12 schools
- Local parks
- Day care centers
- Local-serving gas stations
- Local-serving banks
- Local-serving hotels (e.g. non-destination hotels)
- Local-serving medical
- Student housing projects on or adjacent to college campuses
- Local serving assembly uses (places of worship, community organizations)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)
- Projects generating less than 110 daily vehicle trips. This generally corresponds to the following "typical" development potentials:
  - 11 single family housing units
  - 16 multi-family, condominiums, or townhouse housing units
  - 10,000 square feet of office
  - 15,000 square feet of light industrial
  - 63,000 square feet of warehousing
  - 79,000 square feet of high-cube transload and short-term storage warehouse

Based on review of project type screening, the proposed project is greater than 63,000 square feet of warehousing; therefore, the proposed project cannot be presumed to result in a less than significant VMT impact under this screening criteria.

Screening Assessment Finding

The proposed project does not meet the City of Hesperia screening criteria for either of the three screening types, as written within the City of Hesperia Traffic Study Guidelines.

Although the City of Hesperia guidelines state that the appropriate baseline project TAZ OD VMT per service population should be compared to the baseline County of San Bernardino OD VMT per service population, the project is considered to be in a low VMT generating area based on the PA VMT per worker metric within the SBCTA VMT Screening Tool. PA VMT per worker is the appropriate metric when evaluating industrial projects according to the County of San Bernardino guidelines.

This recommended exemption is based on review of the SBCTA VMT Screening Tool, the proposed project is located within a low VMT area because the project TAZ (53908201) has a TAZ VMT of 13.3 using PA VMT per worker in the baseline year (2022) compared to the County of San Bernardino VMT threshold of 16.9 PA VMT per worker (-21.6% difference); therefore, the proposed project can be presumed to result in a less than significant VMT impact under this screening criteria.

Thus, it appears that the project does meet the intent for the screening criteria for low-VMT generating areas, as specified within the Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) ["Technical Advisory"] and San Bernardino County Transportation Impact Study Guidelines (July 9, 2019)

Ganddini Group, Inc. recommends a detailed VMT analysis exemption be applied to this project based on the project TAZ characteristics as identified, and guidance from San Bernardino County and OPR regarding the method for evaluating VMT for residential projects.

CONCLUSION

We appreciate the opportunity to provide this scoping document for your review. Should you have any questions or comments regarding the proposed scope, please contact Bryan Crawford at (714) 795-3100 x 104 or bryan@ganddini.com.

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 545.000 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	57	14	71	32	50	82	861
Trucks							
2-Axle Trucks	1	1	2	1	1	2	21
3-Axle Trucks	1	1	2	1	1	2	26
4+ Axle Trucks	3	3	6	2	2	4	78
Subtotal	5	5	10	4	4	8	125
Total Vehicle Trips Generated	**62**	**19**	**81**	**36**	**54**	**90**	**986**

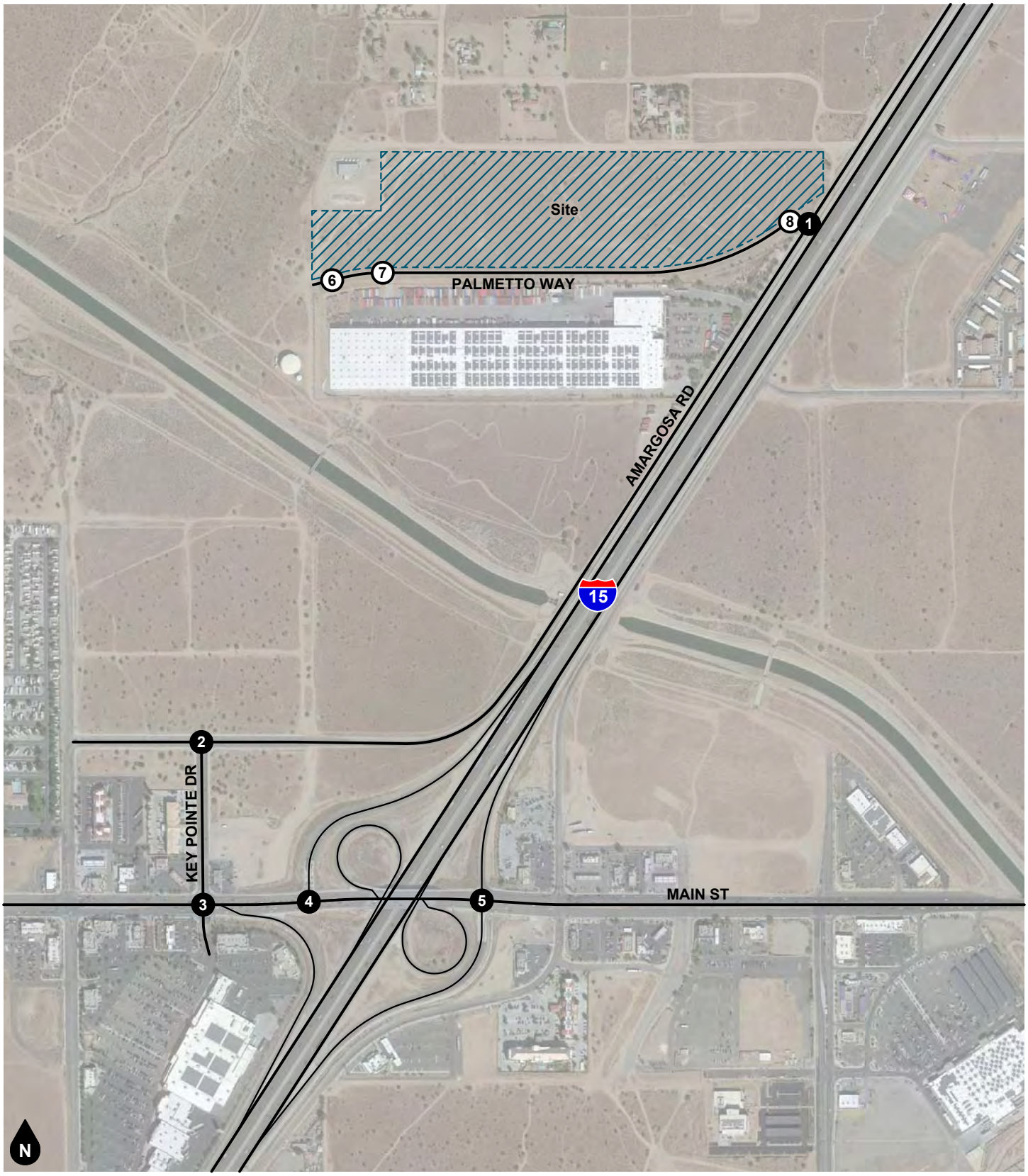
PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	57	14	71	32	50	82	861
Trucks								
2-Axle Trucks	1.5	2	2	4	2	2	4	32
3-Axle Trucks	2.0	2	2	4	2	2	4	52
4+ Axle Trucks	3.0	9	9	18	6	6	12	234
Subtotal		13	13	26	10	10	20	318
Total PCE Trips Generated		**70**	**27**	**97**	**42**	**60**	**102**	**1,179**

Notes:
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.



Legend

(#) Study Intersection

(#) Project Driveway

Figure 1
Project Location Map

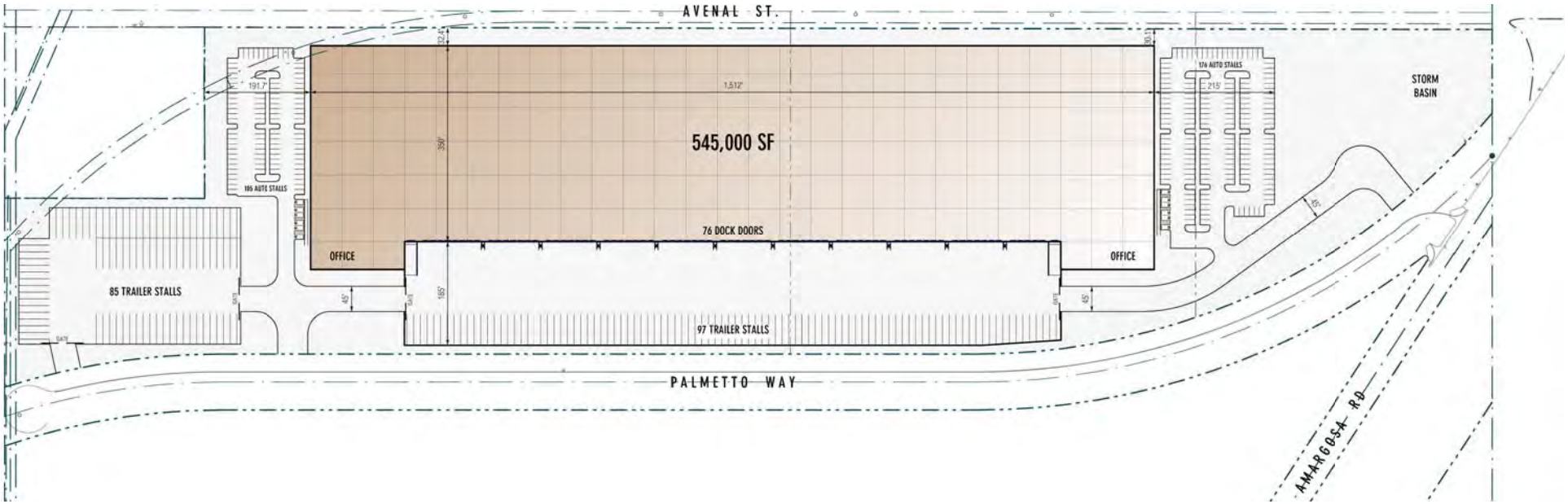


Figure 2
Site Plan

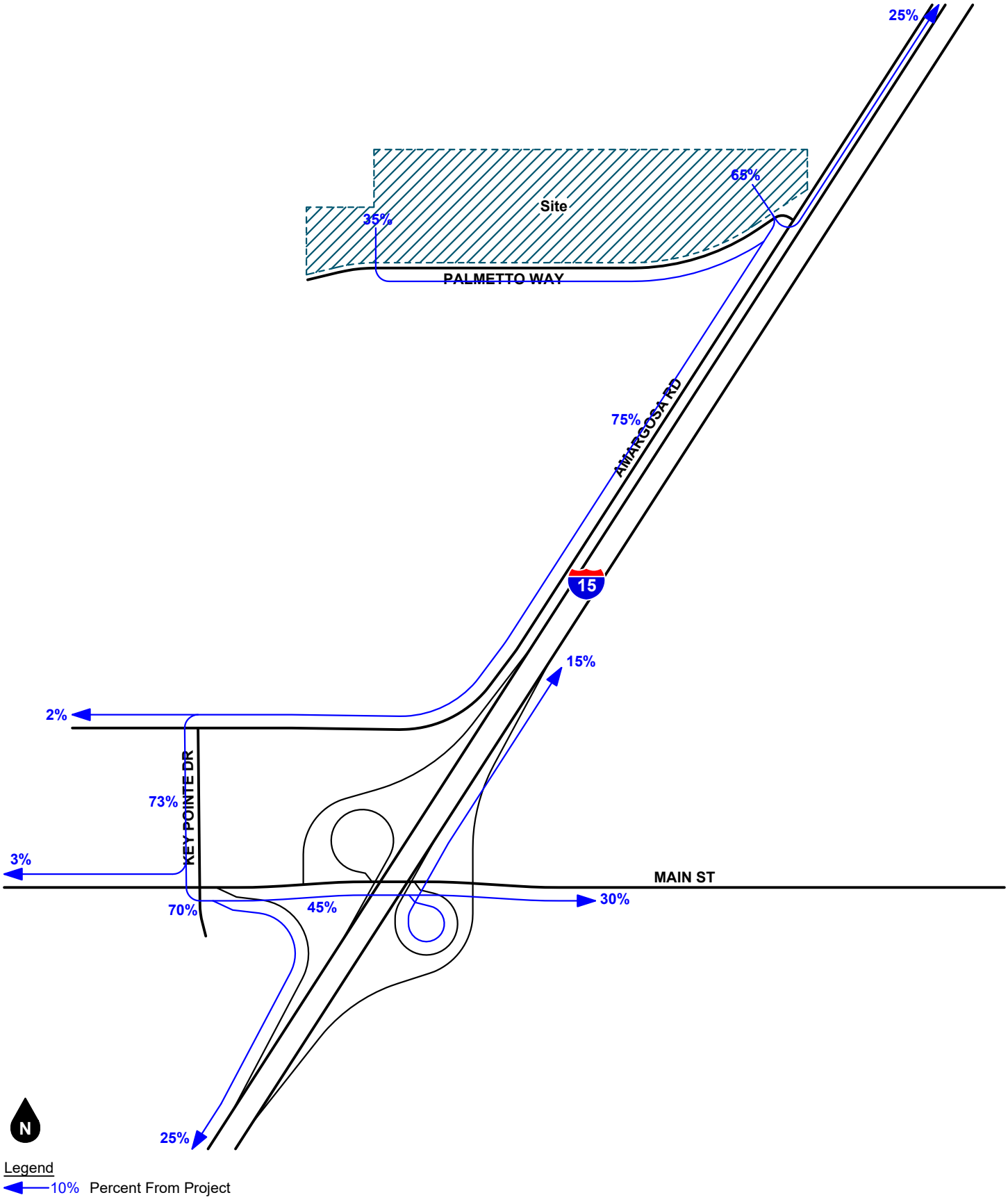


Figure 3
Project Outbound Trip Distribution - Cars

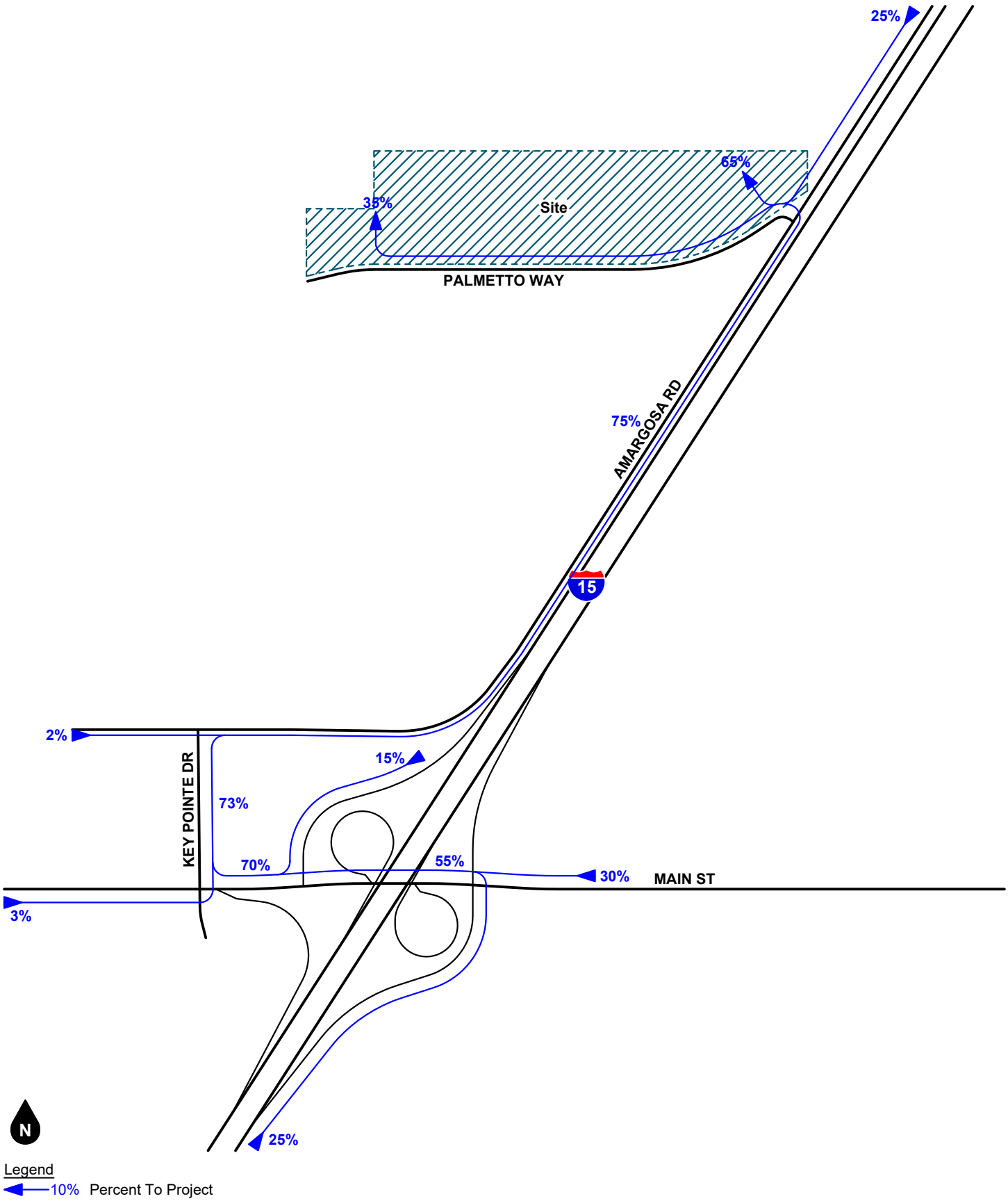


Figure 4
Project Inbound Trip Distribution - Cars

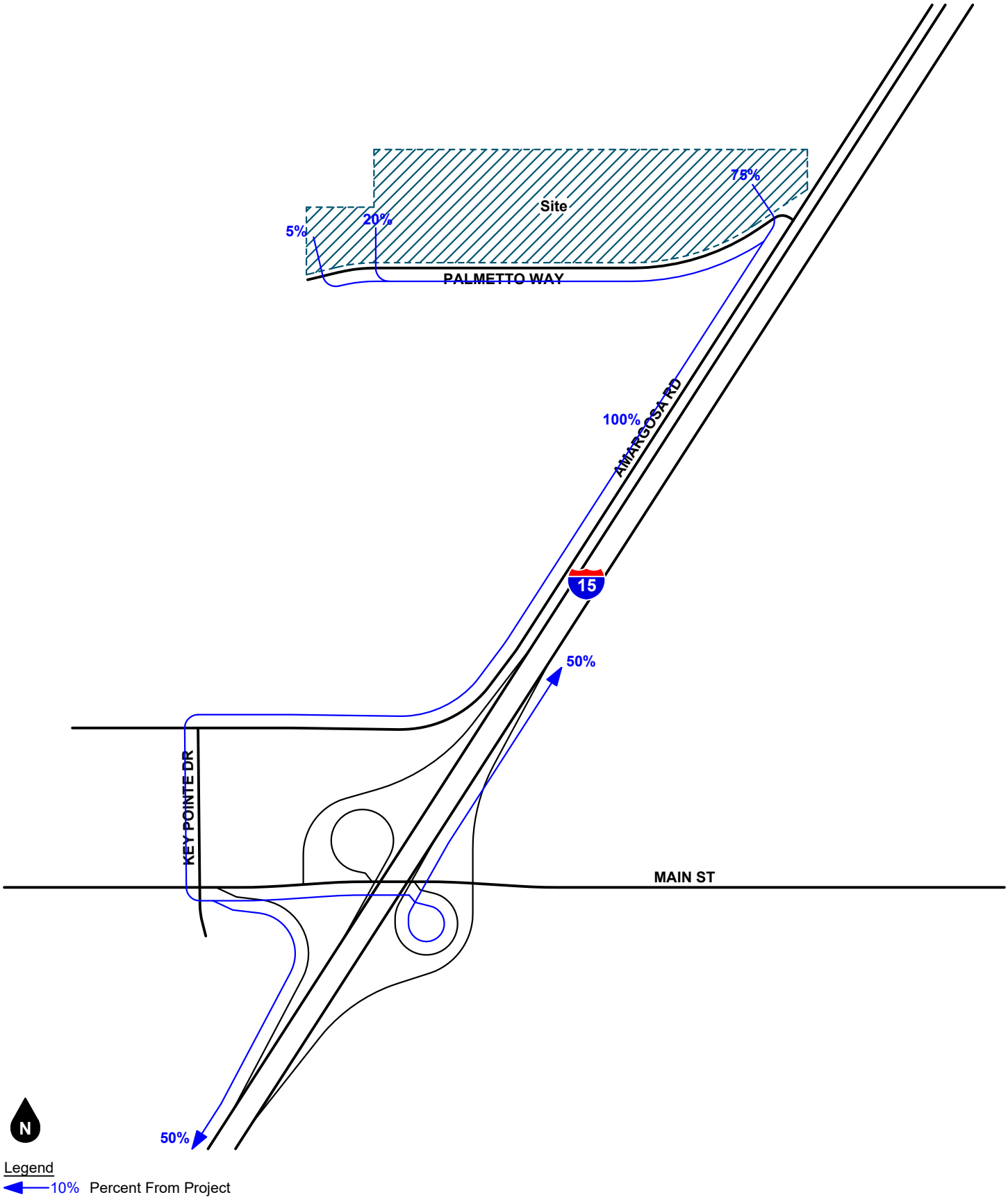


Figure 5
Project Outbound Trip Distribution - Trucks

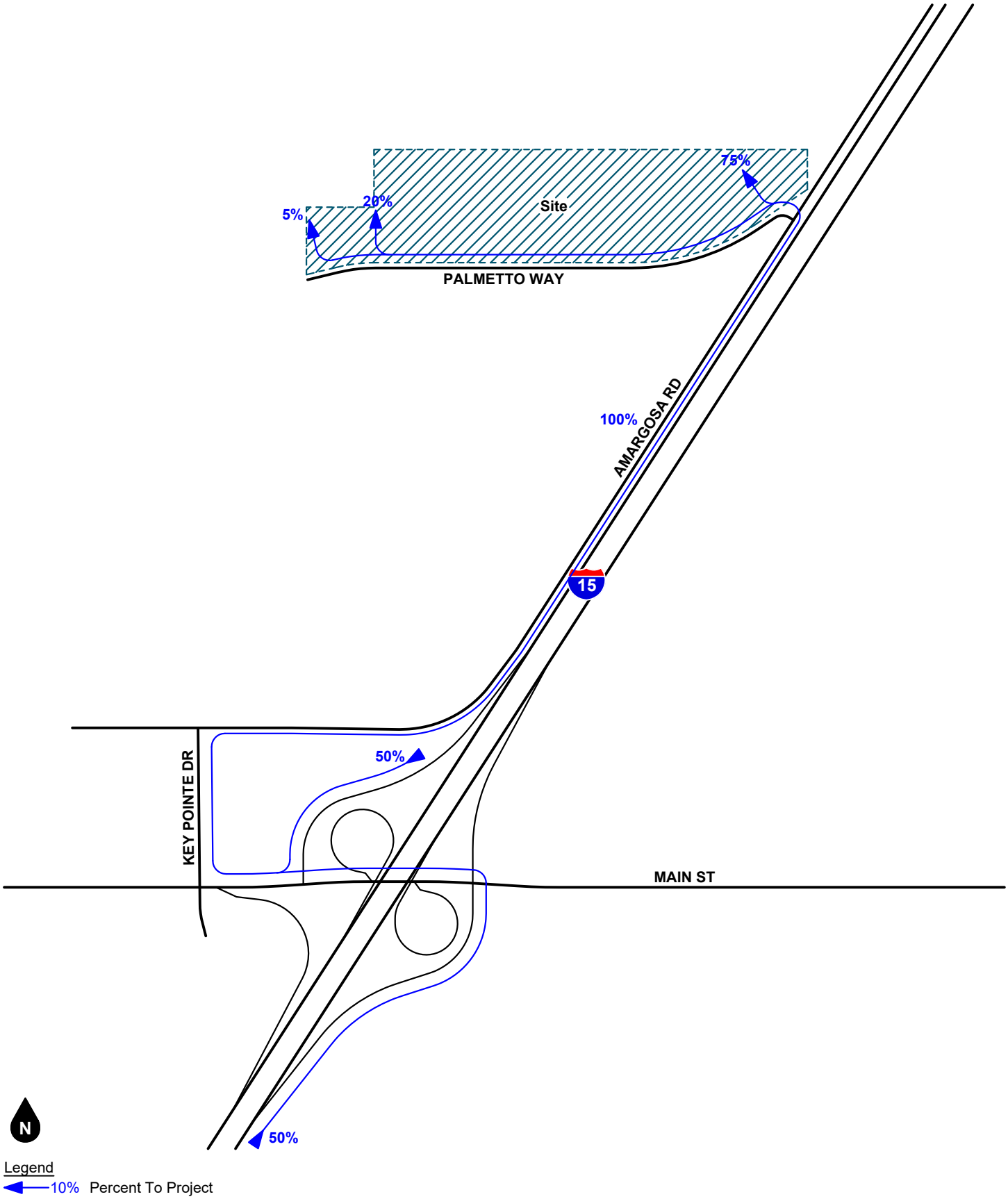


Figure 6
Project Inbound Trip Distribution - Trucks

Appendix A

Site Plan

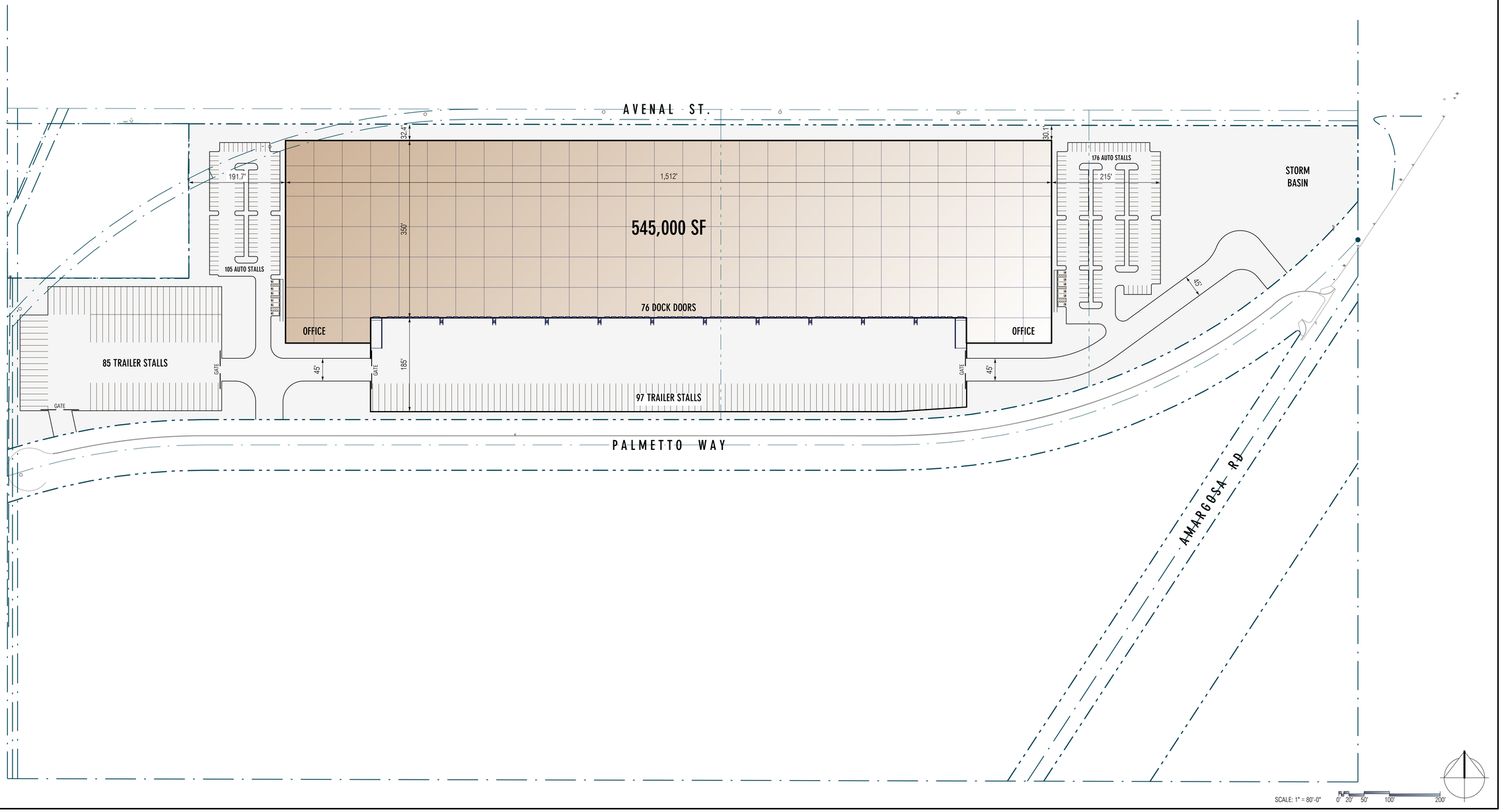
PROJECT DATA:

ZONE:

APPROX. SITE AREA: 1,329,521 SF
30.52 AC

BUILDING AREA: 545,000 SF

COVERAGE: 41.0 %



RGA
Office of Architectural Design
15231 Alton Parkway, Suite 100
Irvine, CA 92618
T 949-341-0920
FX 949-341-0922

SPEC. INDUSTRIAL

PALMETTO WAY - HESPERIA, CA

PRELIMINARY SITE PLAN - SCHEME 02

MARK	DATE	DESCRIPTION
	7/19/21	CONCEPTUAL SITE PLAN

RGA PROJECT NO:	21073.00
CAD FILE NAME:	21073-00-A1-03
DRAWN BY:	CS
CHK'D BY:	CS
COPYRIGHT: RGA, OFFICE OF ARCHITECTURAL DESIGN	
SHEET TITLE	

A1-03

APPENDIX C

VOLUME COUNT WORKSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Wed, May 25, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	Amargosa	LOCATION #:	1	
	EAST & WEST:	Palmeto	CONTROL:	STOP E	

NOTES:

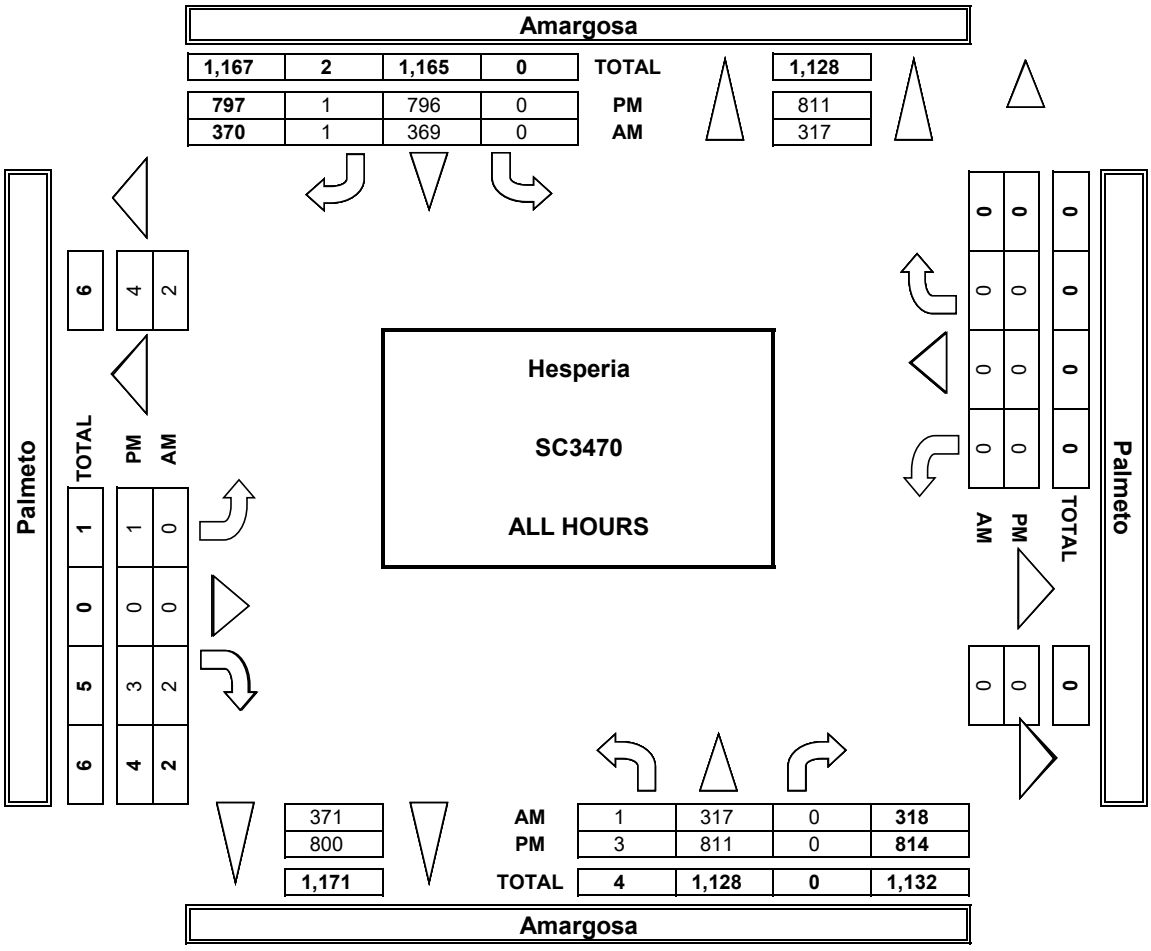
AM / PM / MD / OTHER / OTHER

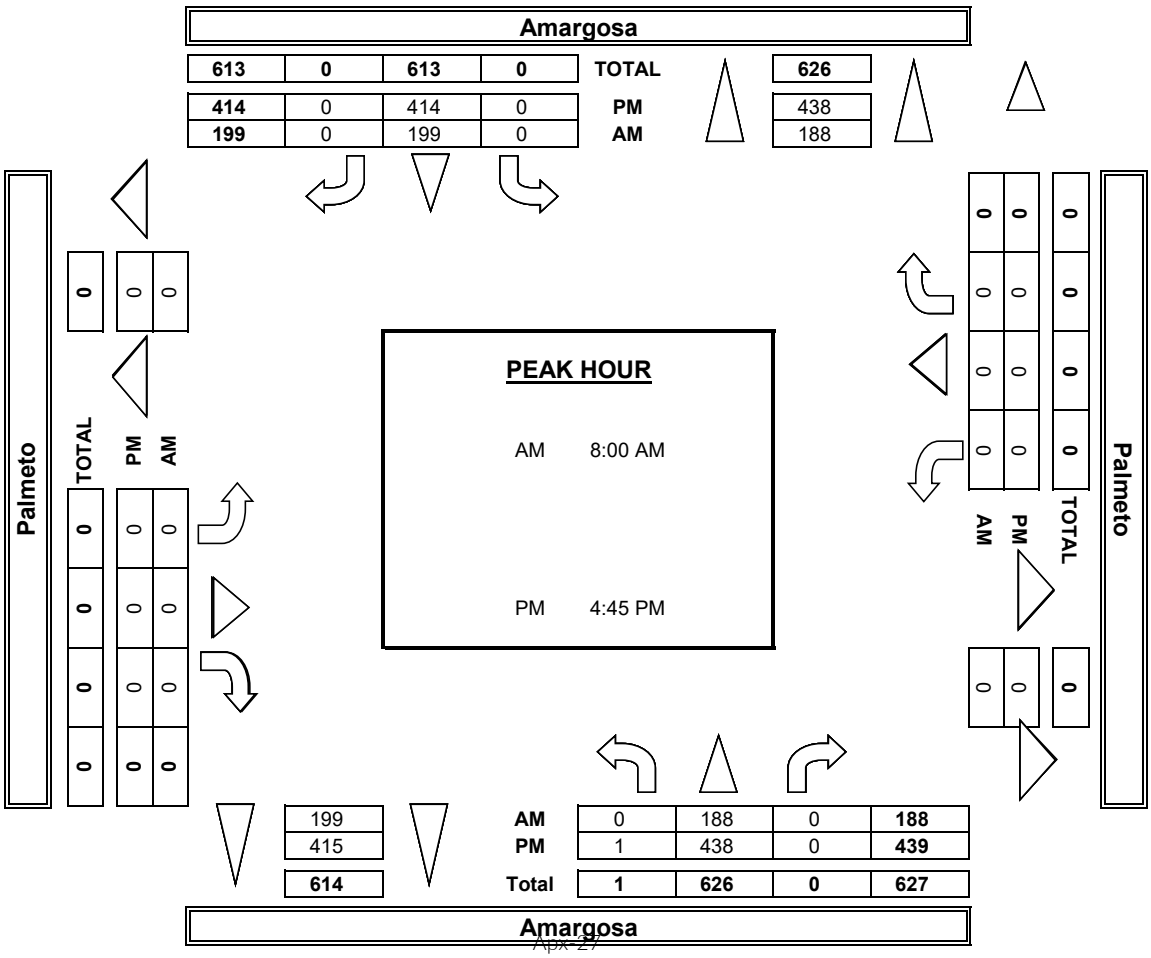
▲ N ◄ W E ► S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto			
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	31	0	0	34	0	0	0	0	0	0	0	65
	7:15 AM	0	24	0	0	43	1	0	0	1	0	0	0	69
	7:30 AM	1	26	0	0	48	0	0	0	1	0	0	0	76
	7:45 AM	0	48	0	0	45	0	0	0	0	0	0	0	93
	8:00 AM	0	36	0	0	43	0	0	0	0	0	0	0	79
	8:15 AM	0	38	0	0	71	0	0	0	0	0	0	0	109
	8:30 AM	0	62	0	0	36	0	0	0	0	0	0	0	98
	8:45 AM	0	52	0	0	49	0	0	0	0	0	0	0	101
	VOLUMES	1	317	0	0	369	1	0	0	2	0	0	0	690
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
	APP/DEPART	318	/	317	370	/	371	2	/	0	0	/	2	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	188	0	0	199	0	0	0	0	0	0	0	387
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.758			0.701			0.000			0.000		0.888
	APP/DEPART	188	/	188	199	/	199	0	/	0	0	/	0	0
PM	04:00 PM	1	102	0	0	88	0	0	0	3	0	0	0	194
	4:15 PM	1	91	0	0	98	0	0	0	0	0	0	0	190
	4:30 PM	0	96	0	0	103	1	1	0	0	0	0	0	201
	4:45 PM	0	96	0	0	108	0	0	0	0	0	0	0	204
	5:00 PM	0	131	0	0	102	0	0	0	0	0	0	0	233
	5:15 PM	0	92	0	0	112	0	0	0	0	0	0	0	204
	5:30 PM	1	119	0	0	92	0	0	0	0	0	0	0	212
	5:45 PM	0	84	0	0	93	0	0	0	0	0	0	0	177
	VOLUMES	3	811	0	0	796	1	1	0	3	0	0	0	1,615
	APPROACH %	0%	100%	0%	0%	100%	0%	25%	0%	75%	0%	0%	0%	
	APP/DEPART	814	/	811	797	/	800	4	/	0	0	/	4	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	1	438	0	0	414	0	0	0	0	0	0	0	853
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.838			0.924			0.000			0.000		0.915
	APP/DEPART	439	/	438	414	/	415	0	/	0	0	/	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2					

	NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto			
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL
7:00 AM	0	33	0	0	34	0	0	0	0	0	0	0	67
7:15 AM	0	25	0	0	47	1	0	0	1	0	0	0	73
7:30 AM	1	27	0	0	52	0	0	0	1	0	0	0	81
7:45 AM	0	52	0	0	47	0	0	0	0	0	0	0	99
8:00 AM	0	39	0	0	45	0	0	0	0	0	0	0	84
8:15 AM	0	39	0	0	76	0	0	0	0	0	0	0	115
8:30 AM	0	65	0	0	36	0	0	0	0	0	0	0	101
8:45 AM	0	54	0	0	52	0	0	0	0	0	0	0	105
AM VOLUMES	1	333	0	0	388	1	0	0	2	0	0	0	724
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	
APP/DEPART	334	/	333	389	/	390	2	/	0	0	/	2	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	197	0	0	208	0	0	0	0	0	0	0	405
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.756			0.684			0.000			0.000		0.879
APP/DEPART	197	/	197	208	/	208	0	/	0	0	/	0	0
04:00 PM	1	104	0	0	90	0	0	0	4	0	0	0	198
4:15 PM	1	95	0	0	100	0	0	0	0	0	0	0	196
4:30 PM	0	101	0	0	106	1	1	0	0	0	0	0	209
4:45 PM	0	97	0	0	108	0	0	0	0	0	0	0	205
5:00 PM	0	134	0	0	103	0	0	0	0	0	0	0	236
5:15 PM	0	94	0	0	114	0	0	0	0	0	0	0	207
5:30 PM	1	119	0	0	93	0	0	0	0	0	0	0	213
5:45 PM	0	86	0	0	93	0	0	0	0	0	0	0	179
PM VOLUMES	3	828	0	0	805	1	1	0	4	0	0	0	1,642
APPROACH %	0%	100%	0%	0%	100%	0%	20%	0%	80%	0%	0%	0%	
APP/DEPART	831	/	829	806	/	809	5	/	0	0	/	4	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	1	443	0	0	417	0	0	0	0	0	0	0	861
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR		0.831			0.917			0.000			0.000		0.912
APP/DEPART	444	/	443	417	/	417	0	/	0	0	/	1	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	28	0	0	34	0	0	0	0	0	0	0	62	0	0	0	0	0
7:15 AM	0	23	0	0	40	1	0	0	1	0	0	0	65	0	0	0	0	0
7:30 AM	1	24	0	0	43	0	0	0	1	0	0	0	69	0	0	0	0	0
7:45 AM	0	42	0	0	42	0	0	0	0	0	0	0	84	0	0	0	0	0
8:00 AM	0	34	0	0	40	0	0	0	0	0	0	0	74	0	0	0	0	0
8:15 AM	0	36	0	0	65	0	0	0	0	0	0	0	101	0	0	0	0	0
8:30 AM	0	59	0	0	36	0	0	0	0	0	0	0	95	0	0	0	0	0
8:45 AM	0	49	0	0	47	0	0	0	0	0	0	0	96	0	0	0	0	0
VOLUMES	1	295	0	0	347	1	0	0	2	0	0	0	646	0	0	0	0	0
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
APP/DEPART	296	/	295	348	/	349	2	/	0	0	/	2	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	178	0	0	188	0	0	0	0	0	0	0	366					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.754			0.723			0.000			0.000		0.906					
APP/DEPART	178	/	178	188	/	188	0	/	0	0	/	0	0					
PM																		
04:00 PM	1	100	0	0	85	0	0	0	1	0	0	0	187	0	0	0	0	0
4:15 PM	1	86	0	0	95	0	0	0	0	0	0	0	182	0	0	0	0	0
4:30 PM	0	90	0	0	100	1	1	0	0	0	0	0	192	0	0	1	0	1
4:45 PM	0	94	0	0	108	0	0	0	0	0	0	0	202	0	0	0	0	0
5:00 PM	0	127	0	0	101	0	0	0	0	0	0	0	228	0	0	0	0	0
5:15 PM	0	89	0	0	109	0	0	0	0	0	0	0	198	0	0	0	0	0
5:30 PM	1	119	0	0	91	0	0	0	0	0	0	0	211	1	0	0	0	1
5:45 PM	0	81	0	0	93	0	0	0	0	0	0	0	174	0	0	0	0	0
VOLUMES	3	786	0	0	782	1	1	0	1	0	0	0	1,574	1	0	1	0	2
APPROACH %	0%	100%	0%	0%	100%	0%	50%	0%	50%	0%	0%	0%						
APP/DEPART	789	/	786	783	/	784	2	/	0	0	/	4	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	429	0	0	409	0	0	0	0	0	0	0	839					
APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.846			0.938			0.000			0.000		0.920					
APP/DEPART	430	/	429	409	/	410	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

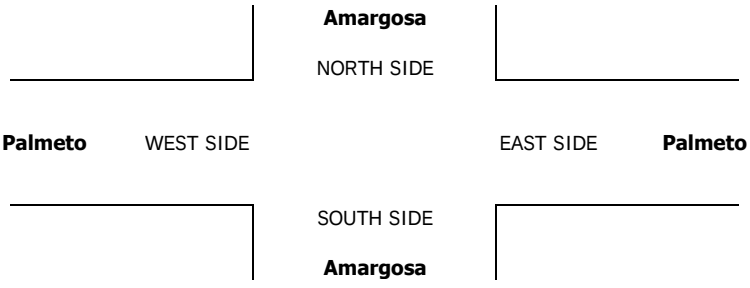
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
	7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	7:30 AM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	7:45 AM	0	4	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
	8:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0
	8:15 AM	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	8:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:45 AM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	VOLUMES	0	17	0	0	15	0	0	0	0	0	0	0	32	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	17	/	17	15	/	15	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	7	0	0	8	0	0	0	0	0	0	0	15					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.583			0.500			0.000			0.000		0.625					
	APP/DEPART	7	/	7	8	/	8	0	/	0	0	/	0	0					
PM	04:00 PM	0	1	0	0	3	0	0	0	2	0	0	0	6	0	0	0	0	0
	4:15 PM	0	4	0	0	3	0	0	0	0	0	0	0	7	0	0	0	0	0
	4:30 PM	0	4	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0
	4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	5:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0
	5:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	6	0	0	0	0	0
	5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
	VOLUMES	0	20	0	0	13	0	0	0	2	0	0	0	35	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	20	/	20	13	/	15	2	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	8	0	0	5	0	0	0	0	0	0	0	13					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.667			0.417			0.000			0.000		0.542					
	APP/DEPART	8	/	8	5	/	5	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	04:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	2	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	4	/	4	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	2	0	0	2	0	0	0	0	0	0	0	4					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.500			0.000			0.000		1.000					
	APP/DEPART	2	/	2	2	/	2	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	2	/	2	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Amargosa

NORTH SIDE

Palmeto WEST SIDE EAST SIDE **Palmeto**

SOUTH SIDE

Amargosa

INTERSECTION TURNING MOVEMENT COUNTS

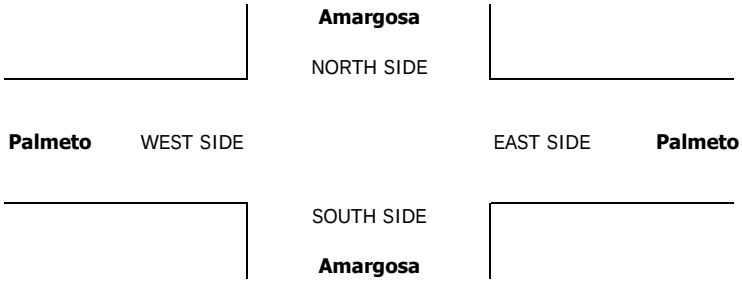
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Amargosa	LOCATION #:	1
WEDNESDAY	EAST & WEST:	Palmeto	CONTROL:	STOP E

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Amargosa			SOUTHBOUND Amargosa			EASTBOUND Palmeto			WESTBOUND Palmeto				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0	ET X	ER 0	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	3	/	3	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.250			0.000			0.000		0.500					
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	1	0	0	0	0	0	0	0	0	0	0	1					
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.000			0.000			0.000		0.250					
	APP/DEPART	1	/	1	0	/	0	0	/	0	0	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Wed, May 25, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	Key Pointe	LOCATION #:	4	
	EAST & WEST:	Amargosa	CONTROL:	STOP N	

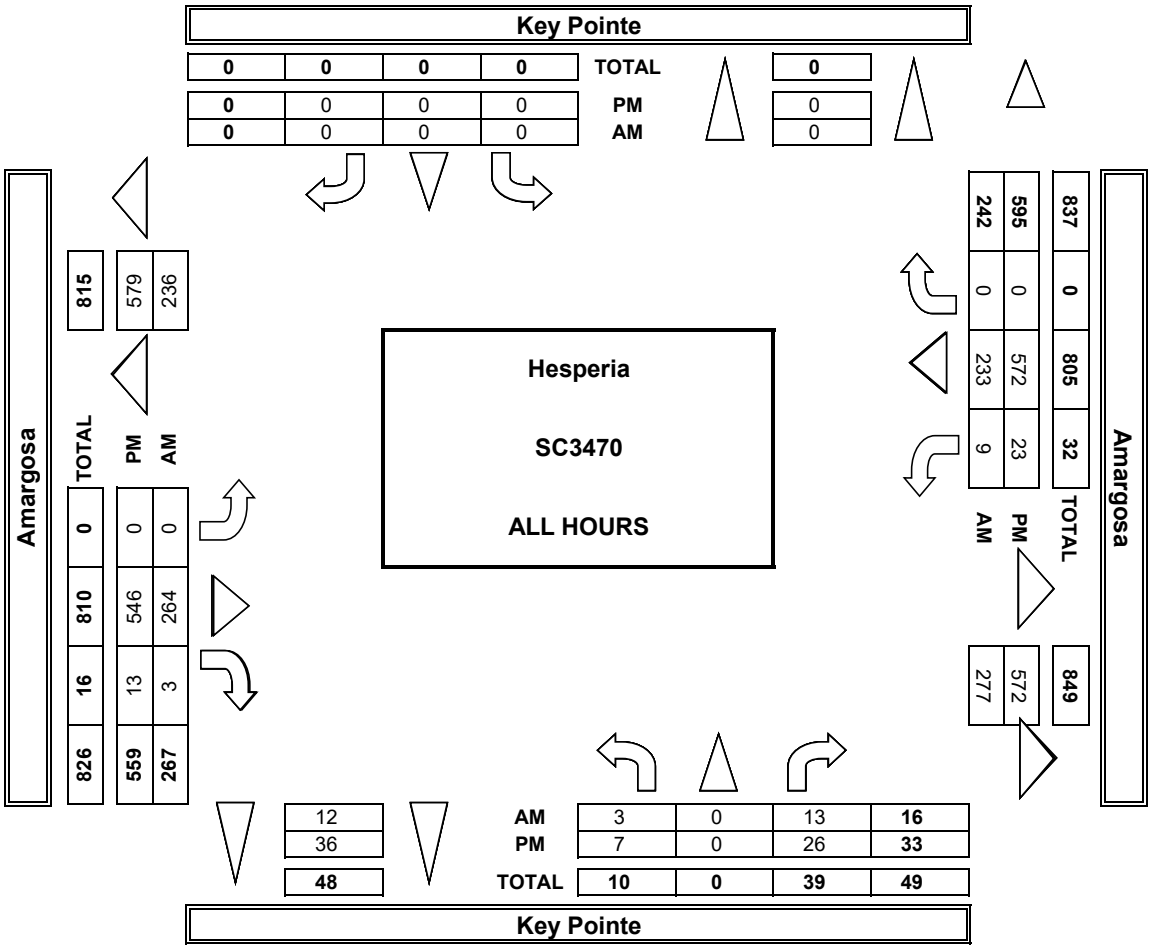
NOTES:

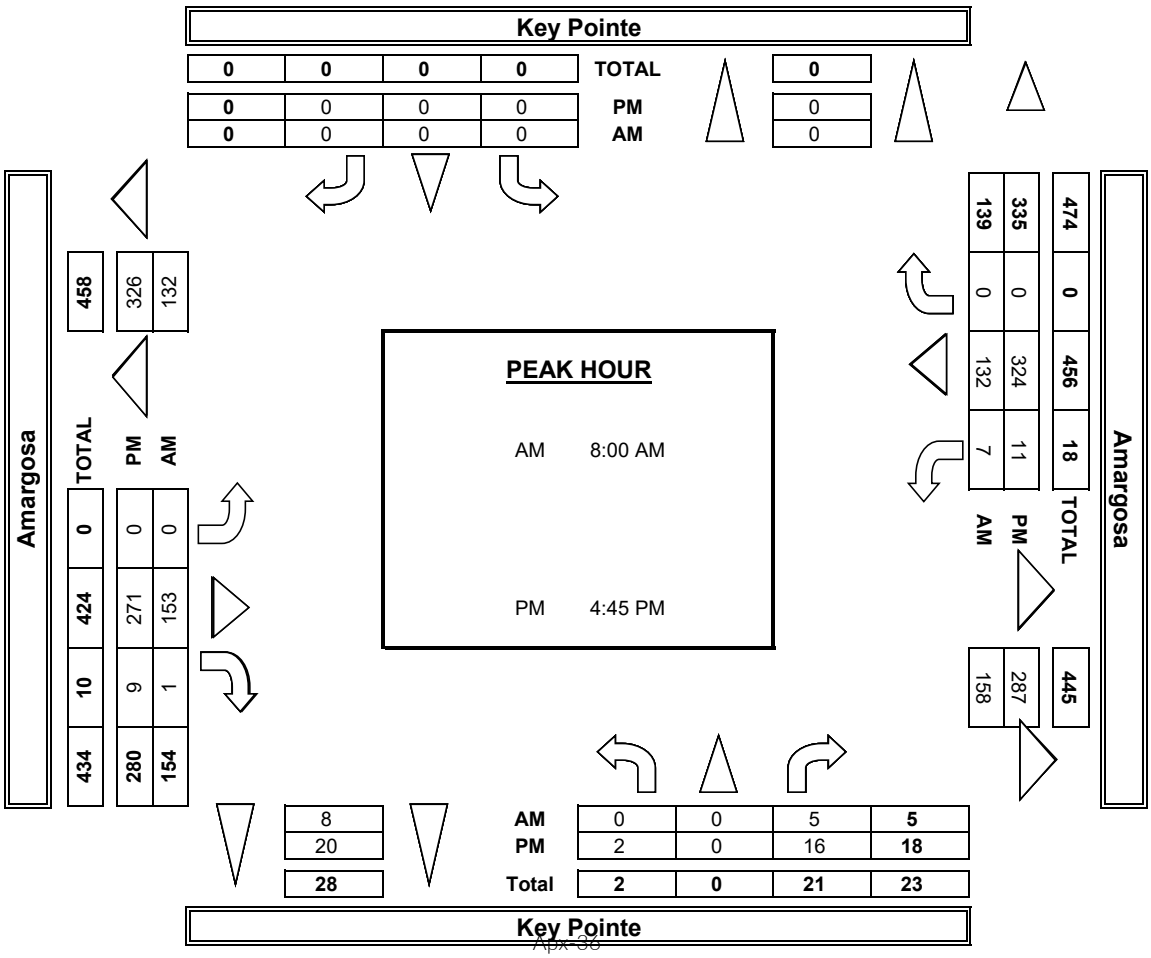
AM / PM / MD / OTHER / OTHER — ▲ N ◄ W E ► S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa			
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL
AM	7:00 AM	2	0	1	0	0	0	0	22	0	0	26	0	51
	7:15 AM	0	0	2	0	0	0	0	20	0	1	21	0	44
	7:30 AM	0	0	3	0	0	0	0	39	1	1	22	0	66
	7:45 AM	1	0	2	0	0	0	0	30	1	0	32	0	66
	8:00 AM	0	0	1	0	0	0	0	33	1	3	18	0	56
	8:15 AM	0	0	0	0	0	0	0	58	0	4	25	0	87
	8:30 AM	0	0	3	0	0	0	0	28	0	0	51	0	82
	8:45 AM	0	0	1	0	0	0	0	34	0	0	38	0	73
	VOLUMES	3	0	13	0	0	0	0	264	3	9	233	0	525
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	99%	1%	4%	96%	0%	
	APP/DEPART	16	/	0	0	/	12	267	/	277	242	/	236	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	5	0	0	0	0	153	1	7	132	0	298
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%	
	PEAK HR FACTOR		0.417			0.000			0.664			0.681		0.856
	APP/DEPART	5	/	0	0	/	8	154	/	158	139	/	132	0
PM	04:00 PM	3	0	3	0	0	0	0	62	2	4	61	0	135
	4:15 PM	0	0	2	0	0	0	0	73	0	3	59	0	137
	4:30 PM	1	0	4	0	0	0	0	73	2	4	69	0	153
	4:45 PM	0	0	3	0	0	0	0	71	5	2	77	0	158
	5:00 PM	0	0	4	0	0	0	0	65	1	2	97	0	169
	5:15 PM	0	0	3	0	0	0	0	70	3	2	65	0	143
	5:30 PM	2	0	6	0	0	0	0	65	0	5	85	0	163
	5:45 PM	1	0	1	0	0	0	0	67	0	1	59	0	129
	VOLUMES	7	0	26	0	0	0	0	546	13	23	572	0	1,187
	APPROACH %	21%	0%	79%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
	APP/DEPART	33	/	0	0	/	36	559	/	572	595	/	579	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	2	0	16	0	0	0	0	271	9	11	324	0	633
	APPROACH %	11%	0%	89%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
	PEAK HR FACTOR		0.563			0.000			0.921			0.846		0.936
	APP/DEPART	18	/	0	0	/	20	280	/	287	335	/	326	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM PM MD OTHER OTHER	▲ N ◄ W E ► S ▼	
	Factor	1	1.5	2	3	2	2					

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa			
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL
AM 7:00 AM	3	0	1	0	0	0	0	22	0	0	27	0	53
7:15 AM	0	0	2	0	0	0	0	22	0	1	22	0	47
7:30 AM	0	0	5	0	0	0	0	44	1	3	24	0	77
7:45 AM	2	0	2	0	0	0	0	32	1	0	34	0	71
8:00 AM	0	0	1	0	0	0	0	34	1	3	22	0	61
8:15 AM	0	0	0	0	0	0	0	66	0	4	27	0	96
8:30 AM	0	0	3	0	0	0	0	28	0	0	53	0	84
8:45 AM	0	0	1	0	0	0	0	36	0	0	41	0	78
VOLUMES	4	0	15	0	0	0	0	283	3	11	249	0	565
APPROACH %	21%	0%	79%	0%	0%	0%	0%	99%	1%	4%	96%	0%	
APP/DEPART	19	/	0	0	/	14	286	/	298	260	/	253	0
BEGIN PEAK HR		8:00 AM											
VOLUMES	0	0	5	0	0	0	0	163	1	7	142	0	318
APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%	
PEAK HR FACTOR		0.417			0.000			0.626			0.710		0.828
APP/DEPART	5	/	0	0	/	8	164	/	168	149	/	142	0
PM 04:00 PM	3	0	4	0	0	0	0	73	2	6	63	0	150
4:15 PM	0	0	2	0	0	0	0	79	0	4	64	0	148
4:30 PM	1	0	5	0	0	0	0	74	3	4	71	0	157
4:45 PM	0	0	4	0	0	0	0	73	5	2	80	0	164
5:00 PM	0	0	5	0	0	0	0	68	1	2	102	0	177
5:15 PM	0	0	4	0	0	0	0	73	3	2	70	0	152
5:30 PM	3	0	7	0	0	0	0	70	0	6	89	0	174
5:45 PM	1	0	1	0	0	0	0	67	0	1	62	0	132
VOLUMES	8	0	30	0	0	0	0	575	14	27	599	0	1,251
APPROACH %	20%	0%	80%	0%	0%	0%	0%	98%	2%	4%	96%	0%	
APP/DEPART	37	/	0	0	/	40	588	/	604	626	/	607	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	3	0	19	0	0	0	0	283	9	12	341	0	666
APPROACH %	12%	0%	88%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
PEAK HR FACTOR		0.583			0.000			0.936			0.847		0.940
APP/DEPART	21	/	0	0	/	21	292	/	302	353	/	343	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

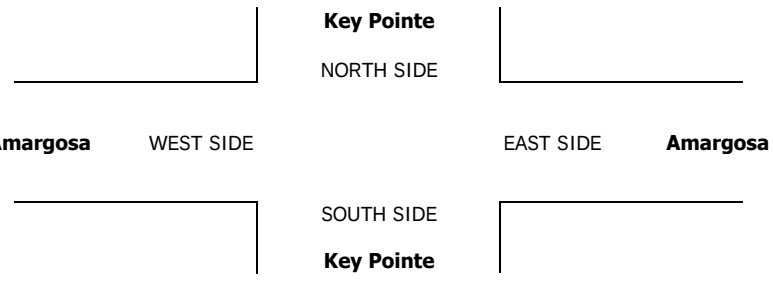
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	1	0	1	0	0	0	0	22	0	0	25	0	49	0	0	0	0	0
7:15 AM	0	0	2	0	0	0	0	19	0	1	20	0	42	0	0	0	0	0
7:30 AM	0	0	2	0	0	0	0	34	1	0	21	0	58	0	0	0	0	0
7:45 AM	0	0	2	0	0	0	0	27	1	0	29	0	59	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	32	1	3	15	0	52	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	52	0	4	23	0	79	0	0	0	0	0
8:30 AM	0	0	3	0	0	0	0	28	0	0	49	0	80	0	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	33	0	0	35	0	69	0	0	0	0	0
AM VOLUMES	1	0	12	0	0	0	0	247	3	8	217	0	488	0	0	0	0	0
AM APPROACH %	8%	0%	92%	0%	0%	0%	0%	99%	1%	4%	96%	0%						
AM APP/DEPART	13	/	0	0	/	11	250	/	259	225	/	218	0					
AM BEGIN PEAK HR		8:00 AM																
AM VOLUMES	0	0	5	0	0	0	0	145	1	7	122	0	280					
AM APPROACH %	0%	0%	100%	0%	0%	0%	0%	99%	1%	5%	95%	0%						
AM PEAK HR FACTOR		0.417			0.000			0.702			0.658		0.875					
AM APP/DEPART	5	/	0	0	/	8	146	/	150	129	/	122	0					
04:00 PM	3	0	2	0	0	0	0	53	2	2	59	0	121	0	0	0	0	0
4:15 PM	0	0	2	0	0	0	0	67	0	2	56	0	127	0	0	0	0	0
4:30 PM	1	0	3	0	0	0	0	72	1	4	66	0	147	0	0	0	0	0
4:45 PM	0	0	2	0	0	0	0	70	5	2	74	0	153	0	0	0	0	0
5:00 PM	0	0	3	0	0	0	0	63	1	2	91	0	160	0	0	0	0	0
5:15 PM	0	0	1	0	0	0	0	67	3	2	62	0	135	0	0	0	0	0
5:30 PM	1	0	5	0	0	0	0	62	0	3	82	0	153	0	0	0	0	0
5:45 PM	1	0	1	0	0	0	0	67	0	1	57	0	127	0	0	0	0	0
PM VOLUMES	6	0	19	0	0	0	0	521	12	18	547	0	1,123	0	0	0	0	0
PM APPROACH %	24%	0%	76%	0%	0%	0%	0%	98%	2%	3%	97%	0%						
PM APP/DEPART	25	/	0	0	/	30	533	/	540	565	/	553	0					
PM BEGIN PEAK HR		4:45 PM																
PM VOLUMES	1	0	11	0	0	0	0	262	9	9	309	0	601					
PM APPROACH %	8%	0%	92%	0%	0%	0%	0%	97%	3%	3%	97%	0%						
PM PEAK HR FACTOR		0.500			0.000			0.903			0.855		0.939					
PM APP/DEPART	12	/	0	0	/	18	271	/	273	318	/	310	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Key Pointe)			SOUTHBOUND (Key Pointe)			EASTBOUND (Amargosa)			WESTBOUND (Amargosa)				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
	7:45 AM	1	0	0	0	0	0	0	2	0	0	2	0	5	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	3	0	0	1	0	4	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
	VOLUMES	2	0	0	0	0	0	0	8	0	0	6	0	16	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	2	/	0	0	/	0	8	/	8	6	/	8	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	4	0	0	4	0	8					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.333			0.500		0.500					
	APP/DEPART	0	/	0	0	/	0	4	/	4	4	/	4	0					
PM	04:00 PM	0	0	1	0	0	0	0	5	0	0	1	0	7	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	3	0	1	1	0	5	0	0	0	0	0
	4:30 PM	0	0	1	0	0	0	0	1	1	0	2	0	5	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0
	5:00 PM	0	0	1	0	0	0	0	1	0	0	2	0	4	0	0	0	0	0
	5:15 PM	0	0	2	0	0	0	0	2	0	0	1	0	5	0	0	0	0	0
	5:30 PM	1	0	1	0	0	0	0	1	0	2	0	0	5	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	VOLUMES	1	0	7	0	0	0	0	13	1	3	10	0	35	0	0	0	0	0
	APPROACH %	13%	0%	88%	0%	0%	0%	0%	93%	7%	23%	77%	0%						
	APP/DEPART	8	/	0	0	/	4	14	/	20	13	/	11	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	1	0	5	0	0	0	0	4	0	2	5	0	17					
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	100%	0%	29%	71%	0%						
	PEAK HR FACTOR		0.750			0.000			0.500			0.875		0.850					
	APP/DEPART	6	/	0	0	/	2	4	/	9	7	/	6	0					

Key Pointe — NORTH SIDE

Amargosa WEST SIDE — EAST SIDE **Amargosa**

SOUTH SIDE — **Key Pointe**

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

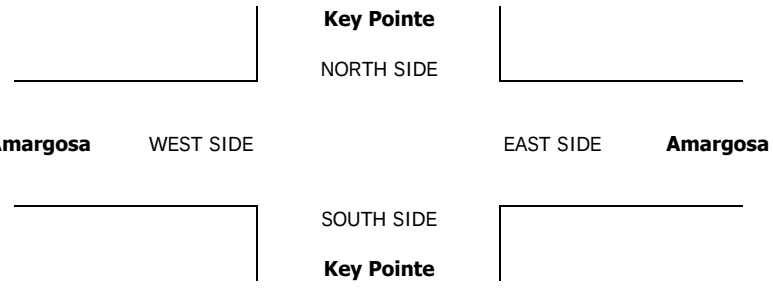
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM																		
04:00 PM	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0	2	4	0	6	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	67%	0%						
APP/DEPART	0	/	0	0	/	2	0	/	0	6	/	4	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	2	0	2					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.250		0.250					
APP/DEPART	0	/	0	0	/	0	0	/	0	2	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

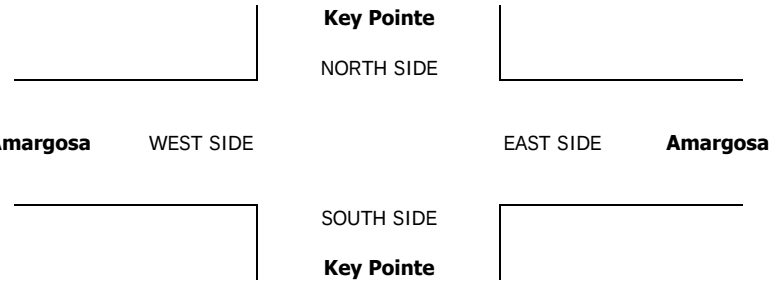
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	0	1	0	1	1	0	4	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
VOLUMES	0	0	1	0	0	0	0	6	0	1	3	0	11	0	0	0	0	0
APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	25%	75%	0%						
APP/DEPART	1	/	0	0	/	1	6	/	7	4	/	3	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	4	0	0	2	0	6					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.333			0.500		0.500					
APP/DEPART	0	/	0	0	/	0	4	/	4	2	/	2	0					
PM																		
04:00 PM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	10	0	0	7	0	17	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	10	/	10	7	/	7	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	0	0	0	0	5	0	0	4	0	9					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.625			0.500		0.750					
APP/DEPART	0	/	0	0	/	0	5	/	5	4	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 5:	NOTES:
RV	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
	LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Key Pointe

NORTH SIDE

Amargosa WEST SIDE EAST SIDE **Amargosa**

SOUTH SIDE

Key Pointe

INTERSECTION TURNING MOVEMENT COUNTS

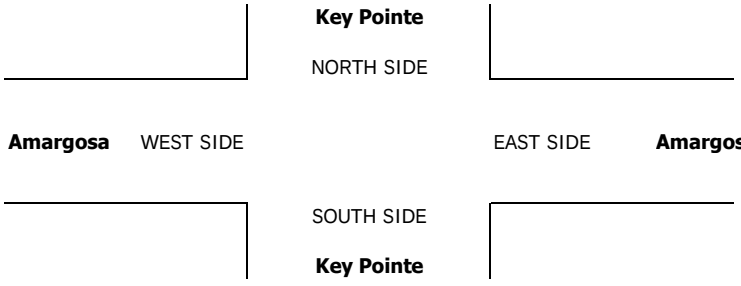
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/25/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	4
WEDNESDAY	EAST & WEST:	Amargosa	CONTROL:	STOP N

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Amargosa			WESTBOUND Amargosa				U-TURNS				
LANES:	NL 1	NT X	NR 1	SL X	ST X	SR X	EL X	ET 2	ER 0	WL 0	WT 2	WR X	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	3	0	0	6	0	9	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	3	/	3	6	/	6	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	4	0	4					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500					
APP/DEPART	0	/	0	0	/	0	0	/	0	4	/	4	0					
PM																		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	2	0	0	4	0	6	0	0	0	0	0
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
APP/DEPART	0	/	0	0	/	0	2	/	2	4	/	4	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	0	0	0	0	0	0	0	4	0	4					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500					
APP/DEPART	0	/	0	0	/	0	0	/	0	4	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Tue, May 17, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	Key Pointe	LOCATION #:	5	
	EAST & WEST:	Main	CONTROL:	SIGNAL	

NOTES:

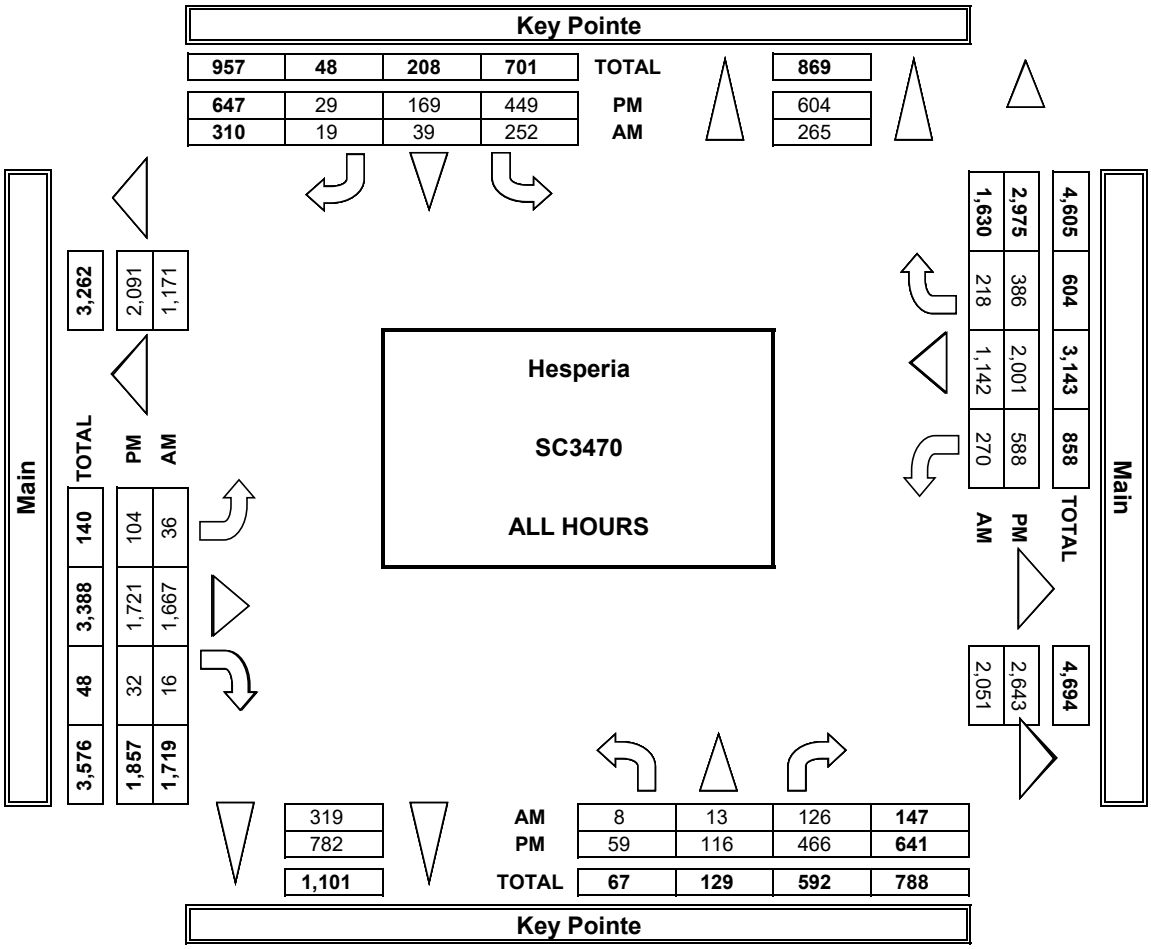
AM / PM / MD / OTHER / OTHER

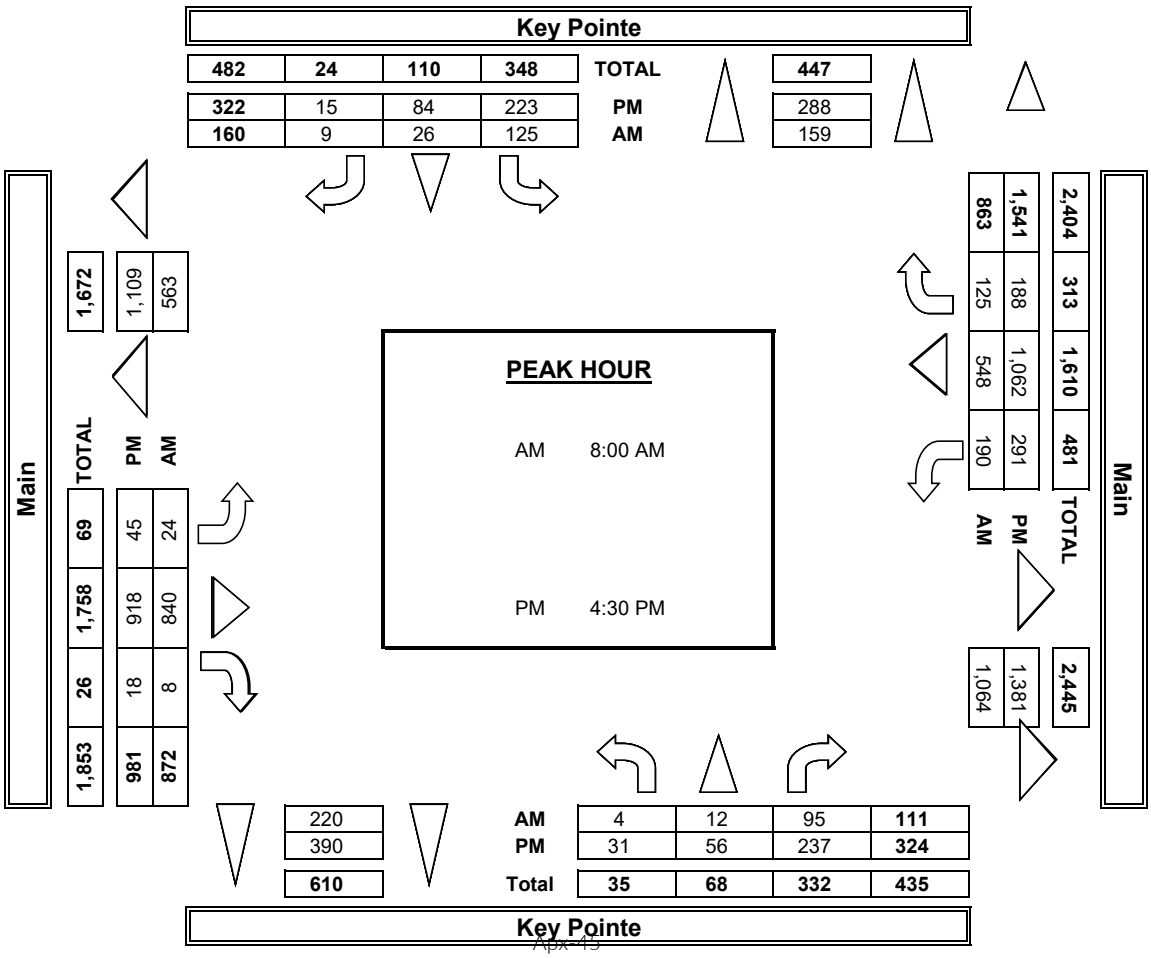
▲ N ▼ S ◄ W E ►

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL
AM	7:00 AM	1	0	12	23	2	4	4	183	1	10	115	29	384
	7:15 AM	3	0	6	27	4	3	2	221	2	19	151	20	458
	7:30 AM	0	1	4	41	4	2	3	196	0	24	171	21	467
	7:45 AM	0	0	9	36	3	1	3	227	5	27	157	23	491
	8:00 AM	1	4	17	40	4	3	6	230	2	37	114	33	491
	8:15 AM	0	2	22	32	5	2	6	207	2	41	129	30	478
	8:30 AM	2	4	28	30	8	1	6	191	3	46	155	22	496
	8:45 AM	1	2	28	23	9	3	6	212	1	66	150	40	541
	VOLUMES	8	13	126	252	39	19	36	1,667	16	270	1,142	218	3,806
	APPROACH %	5%	9%	86%	81%	13%	6%	2%	97%	1%	17%	70%	13%	
	APP/DEPART	147	/	265	310	/	319	1,719	/	2,051	1,630	/	1,171	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	4	12	95	125	26	9	24	840	8	190	548	125	2,006
	APPROACH %	4%	11%	86%	78%	16%	6%	3%	96%	1%	22%	63%	14%	
	PEAK HR FACTOR		0.816			0.851			0.916			0.843		0.927
	APP/DEPART	111	/	159	160	/	220	872	/	1,064	863	/	563	0
PM	4:00 PM	6	16	52	59	19	5	12	193	2	78	268	48	758
	4:15 PM	8	15	58	73	23	3	16	187	4	74	244	49	754
	4:30 PM	7	10	69	52	16	3	9	212	4	79	291	41	793
	4:45 PM	7	14	50	53	29	4	12	223	6	71	265	58	792
	5:00 PM	10	15	69	56	21	4	14	233	2	67	233	44	768
	5:15 PM	7	17	49	62	18	4	10	250	6	74	273	45	815
	5:30 PM	6	17	63	46	28	3	17	211	3	67	230	57	748
	5:45 PM	8	12	56	48	15	3	14	212	5	78	197	44	692
	VOLUMES	59	116	466	449	169	29	104	1,721	32	588	2,001	386	6,120
	APPROACH %	9%	18%	73%	69%	26%	4%	6%	93%	2%	20%	67%	13%	
	APP/DEPART	641	/	604	647	/	782	1,857	/	2,643	2,975	/	2,091	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	31	56	237	223	84	15	45	918	18	291	1,062	188	3,168
	APPROACH %	10%	17%	73%	69%	26%	5%	5%	94%	2%	19%	69%	12%	
	PEAK HR FACTOR		0.862			0.936			0.922			0.937		0.972
	APP/DEPART	324	/	288	322	/	390	981	/	1,381	1,541	/	1,109	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

	NORTHBOUND (Key Pointe)			SOUTHBOUND (Key Pointe)			EASTBOUND (Main)			WESTBOUND (Main)			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL
7:00 AM	1	0	12	25	2	6	4	203	1	10	127	34	425
7:15 AM	3	0	8	32	5	3	3	238	2	19	167	21	500
7:30 AM	0	1	4	44	4	2	3	208	0	26	190	24	504
7:45 AM	0	0	9	38	3	1	4	239	5	30	169	29	525
8:00 AM	1	4	19	46	4	3	7	250	2	39	128	37	538
8:15 AM	0	2	22	32	5	2	7	233	2	41	145	32	522
8:30 AM	2	4	29	33	8	1	9	213	3	46	171	24	542
8:45 AM	1	2	28	26	9	5	8	232	1	68	164	42	584
AM VOLUMES	8	13	130	276	40	23	43	1,815	16	277	1,259	240	4,139
AM APPROACH %	5%	9%	86%	81%	12%	7%	2%	97%	1%	16%	71%	14%	
AM APP/DEPART	151	/	296	339	/	333	1,874	/	2,220	1,776	/	1,290	0
AM BEGIN PEAK HR		8:00 AM											
AM VOLUMES	4	12	97	137	26	11	30	927	8	193	607	134	2,185
AM APPROACH %	4%	11%	86%	79%	15%	6%	3%	96%	1%	21%	65%	14%	
AM PEAK HR FACTOR		0.819			0.818			0.933			0.856		0.936
AM APP/DEPART	113	/	176	174	/	227	965	/	1,161	933	/	622	0
4:00 PM	6	16	52	61	19	6	12	205	2	78	284	49	789
4:15 PM	8	15	59	77	23	3	16	197	4	75	259	52	787
4:30 PM	7	10	70	54	16	3	9	226	4	80	311	41	830
4:45 PM	7	15	51	57	29	4	12	238	6	72	271	59	820
5:00 PM	10	15	72	61	21	4	15	246	2	67	242	49	803
5:15 PM	7	17	49	65	18	4	10	260	6	75	289	46	846
5:30 PM	6	17	64	49	28	5	18	228	3	68	246	64	795
5:45 PM	8	12	57	50	15	3	15	226	5	79	211	45	726
PM VOLUMES	59	117	473	473	169	32	107	1,824	32	593	2,112	404	6,393
PM APPROACH %	9%	18%	73%	70%	25%	5%	5%	93%	2%	19%	68%	13%	
PM APP/DEPART	649	/	628	674	/	794	1,963	/	2,769	3,108	/	2,203	0
PM BEGIN PEAK HR		4:30 PM											
PM VOLUMES	31	57	241	237	84	15	46	969	18	294	1,112	195	3,298
PM APPROACH %	9%	17%	73%	70%	25%	4%	4%	94%	2%	18%	69%	12%	
PM PEAK HR FACTOR		0.848			0.932			0.935			0.927		0.975
PM APP/DEPART	329	/	298	336	/	396	1,033	/	1,446	1,601	/	1,158	0

INTERSECTION TURNING MOVEMENT COUNTS

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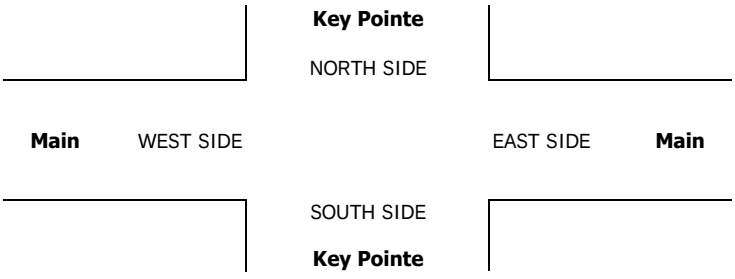
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	1	0	12	22	2	3	4	164	1	10	106	26	351	0	0	0	1	1
7:15 AM	3	0	5	23	2	3	1	202	2	19	131	19	410	0	0	0	1	1
7:30 AM	0	1	4	38	4	2	3	183	0	22	154	19	430	0	0	0	0	0
7:45 AM	0	0	9	34	3	1	2	213	5	25	143	17	452	0	0	0	0	0
8:00 AM	1	4	14	34	4	3	5	210	2	34	95	30	436	0	0	1	1	2
8:15 AM	0	2	22	32	5	2	5	183	2	41	112	28	434	0	0	0	0	0
8:30 AM	2	4	27	27	8	1	4	167	3	46	138	20	447	0	0	0	0	0
8:45 AM	1	2	28	21	9	2	5	192	1	63	132	37	493	0	0	1	3	4
AM VOLUMES	8	13	121	231	37	17	29	1,514	16	260	1,011	196	3,453	0	0	2	6	8
AM APPROACH %	6%	9%	85%	81%	13%	6%	2%	97%	1%	18%	69%	13%						
AM APP/DEPART	142	/	236	285	/	307	1,559	/	1,872	1,467	/	1,038	0					
BEGIN PEAK HR		8:00 AM																
AM VOLUMES	4	12	91	114	26	8	17	752	8	180	477	115	1,810					
AM APPROACH %	4%	11%	85%	77%	18%	5%	2%	97%	1%	23%	61%	15%						
AM PEAK HR FACTOR		0.811			0.902			0.897			0.836		0.918					
AM APP/DEPART	107	/	144	148	/	214	779	/	961	776	/	491	0					
4:00 PM	6	16	52	57	19	4	12	183	2	78	255	47	731	0	0	1	3	4
4:15 PM	8	15	56	69	23	3	16	175	4	73	227	47	716	0	0	0	0	0
4:30 PM	7	10	68	49	16	3	9	197	4	78	275	41	757	0	0	0	1	1
4:45 PM	7	13	49	51	29	4	12	208	6	69	256	56	760	0	0	0	0	0
5:00 PM	10	15	66	53	21	4	13	216	2	67	226	41	734	0	0	1	0	1
5:15 PM	7	17	49	60	18	4	10	234	6	73	258	44	780	0	0	0	2	2
5:30 PM	6	17	61	44	28	2	15	193	3	66	217	53	705	0	0	0	1	1
5:45 PM	8	12	55	47	15	3	13	200	5	77	187	43	665	0	0	0	0	0
PM VOLUMES	59	115	456	430	169	27	100	1,606	32	581	1,901	372	5,848	0	0	2	7	9
PM APPROACH %	9%	18%	72%	69%	27%	4%	6%	92%	2%	20%	67%	13%						
PM APP/DEPART	630	/	585	626	/	775	1,738	/	2,499	2,854	/	1,989	0					
BEGIN PEAK HR		4:30 PM																
PM VOLUMES	31	55	232	213	84	15	43	855	18	284	1,015	182	3,031					
PM APPROACH %	10%	17%	73%	68%	27%	5%	5%	93%	2%	19%	68%	12%						
PM PEAK HR FACTOR		0.874			0.929			0.917			0.942		0.971					
PM APP/DEPART	318	/	280	312	/	386	917	/	1,303	1,484	/	1,062	0					



INTERSECTION TURNING MOVEMENT COUNTS

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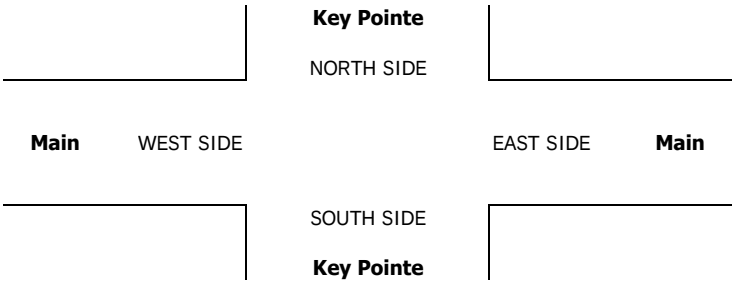
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	10	0	0	4	0	14	0	0	0	0	0
	7:15 AM	0	0	0	2	2	0	1	12	0	0	14	1	32	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	7	0	1	9	1	18	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	1	10	0	1	11	3	26	0	0	0	0	0
	8:00 AM	0	0	3	4	0	0	0	11	0	3	14	1	36	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	1	12	0	0	11	1	25	0	0	0	0	0
	8:30 AM	0	0	1	2	0	0	1	14	0	0	9	0	27	0	0	0	0	0
	8:45 AM	0	0	0	1	0	0	0	11	0	3	13	3	31	0	0	0	0	0
	VOLUMES	0	0	4	9	2	0	4	87	0	8	85	10	209	0	0	0	0	0
	APPROACH %	0%	0%	100%	82%	18%	0%	4%	96%	0%	8%	83%	10%						
	APP/DEPART	4	/	14	11	/	10	91	/	100	103	/	85	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	4	7	0	0	2	48	0	6	47	5	119					
	APPROACH %	0%	0%	100%	100%	0%	0%	4%	96%	0%	10%	81%	9%						
	PEAK HR FACTOR		0.333			0.438			0.833			0.763		0.826					
	APP/DEPART	4	/	7	7	/	6	50	/	59	58	/	47	0					
PM	4:00 PM	0	0	0	1	0	0	0	2	0	0	5	1	9	0	0	0	0	0
	4:15 PM	0	0	2	2	0	0	0	9	0	1	10	1	25	0	0	0	0	0
	4:30 PM	0	0	1	2	0	0	0	9	0	1	6	0	19	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	9	0	2	7	2	21	0	0	0	0	0
	5:00 PM	0	0	2	1	0	0	0	13	0	0	2	0	18	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	14	0	0	9	0	23	0	0	0	0	0
	5:30 PM	0	0	2	1	0	0	2	10	0	1	6	0	22	0	0	0	0	0
	5:45 PM	0	0	1	0	0	0	0	6	0	0	2	0	9	0	0	0	0	0
	VOLUMES	0	0	9	7	0	0	2	72	0	5	47	4	146	0	0	0	0	0
	APPROACH %	0%	0%	100%	100%	0%	0%	3%	97%	0%	9%	84%	7%						
	APP/DEPART	9	/	6	7	/	5	74	/	88	56	/	47	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	4	3	0	0	0	45	0	3	24	2	81					
	APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	10%	83%	7%						
	PEAK HR FACTOR		0.500			0.375			0.804			0.659		0.880					
	APP/DEPART	4	/	2	3	/	3	45	/	52	29	/	24	0					



INTERSECTION TURNING MOVEMENT COUNTS

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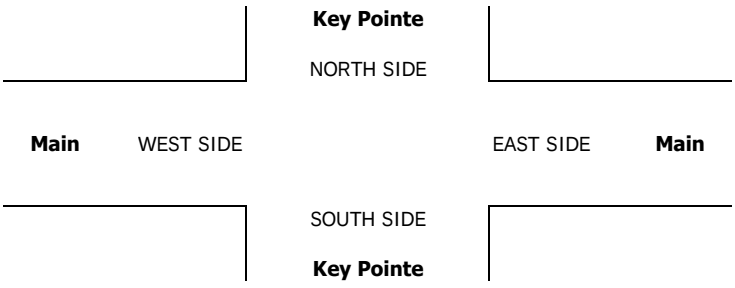
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
7:30 AM	0	0	0	1	0	0	0	2	0	1	2	0	6	0	0	0	0	0
7:45 AM	0	0	0	1	0	0	0	1	0	0	0	2	4	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	2	0	0	4	0	6	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
VOLUMES	0	0	0	2	0	0	0	16	0	1	14	2	35	0	0	0	0	0
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	6%	82%	12%						
APP/DEPART	0	/	2	2	/	1	16	/	18	17	/	14	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	0	9	0	0	10	0	19					
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.750			0.625		0.792					
APP/DEPART	0	/	0	0	/	0	9	/	9	10	/	10	0					
PM																		
4:00 PM	0	0	0	1	0	1	0	3	0	0	1	0	6	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
5:15 PM	0	0	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	1	1	4	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	1	0	1	1	1	5	0	0	0	0	0
VOLUMES	0	0	0	2	0	1	1	11	0	1	11	2	29	0	0	0	0	0
APPROACH %	0%	0%	0%	67%	0%	33%	8%	92%	0%	7%	79%	14%						
APP/DEPART	0	/	3	3	/	1	12	/	13	14	/	12	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	0	0	0	1	0	0	0	4	0	0	6	0	11					
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.250			0.500			0.750		0.917					
APP/DEPART	0	/	0	1	/	0	4	/	5	6	/	6	0					



INTERSECTION TURNING MOVEMENT COUNTS

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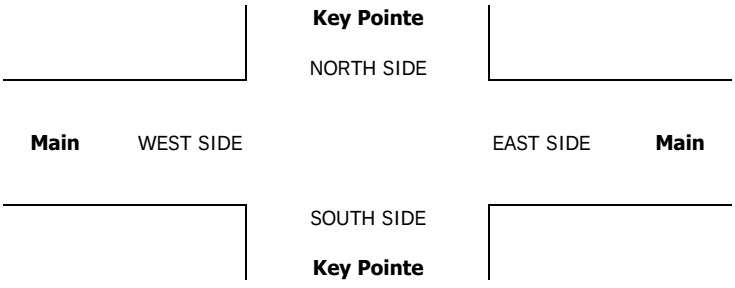
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND (Key Pointe)			SOUTHBOUND (Key Pointe)			EASTBOUND (Main)			WESTBOUND (Main)				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	1	0	1	0	6	0	0	5	2	15	0	0	0	0	0
	7:15 AM	0	0	1	2	0	0	0	4	0	0	3	0	10	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	2	0	0	6	1	9	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	3	0	1	3	1	8	0	0	0	0	0
	8:00 AM	0	0	0	2	0	0	0	5	0	0	2	1	10	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	8	0	0	4	0	12	0	0	0	0	0
	8:30 AM	0	0	0	1	0	0	1	5	0	0	3	0	10	0	0	0	0	0
	8:45 AM	0	0	0	1	0	1	1	5	0	0	2	0	10	0	0	0	0	0
	VOLUMES	0	0	1	7	0	2	2	38	0	1	28	5	84	0	0	0	0	0
	APPROACH %	0%	0%	100%	78%	0%	22%	5%	95%	0%	3%	82%	15%						
	APP/DEPART	1	/	7	9	/	1	40	/	46	34	/	30	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	4	0	1	2	23	0	0	11	1	42					
	APPROACH %	0%	0%	0%	80%	0%	20%	8%	92%	0%	0%	92%	8%						
	PEAK HR FACTOR		0.000			0.625			0.781			0.750		0.875					
	APP/DEPART	0	/	3	5	/	0	25	/	27	12	/	12	0					
PM	4:00 PM	0	0	0	0	0	0	0	3	0	0	5	0	8	0	0	0	0	0
	4:15 PM	0	0	0	1	0	0	0	2	0	0	3	1	7	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	3	0	0	7	0	10	0	0	0	0	0
	4:45 PM	0	0	0	2	0	0	0	4	0	0	0	0	6	0	0	0	0	0
	5:00 PM	0	0	1	2	0	0	0	2	0	0	3	2	10	0	0	0	0	0
	5:15 PM	0	0	0	1	0	0	0	1	0	0	5	0	7	0	0	0	0	0
	5:30 PM	0	0	0	1	0	1	0	4	0	0	6	3	15	0	0	0	0	0
	5:45 PM	0	0	0	1	0	0	0	5	0	0	5	0	11	0	0	0	0	0
	VOLUMES	0	0	1	8	0	1	0	24	0	0	34	6	74	0	0	0	0	0
	APPROACH %	0%	0%	100%	89%	0%	11%	0%	100%	0%	0%	85%	15%						
	APP/DEPART	1	/	6	9	/	0	24	/	33	40	/	35	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	1	5	0	0	0	10	0	0	15	2	33					
	APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	0%	88%	12%						
	PEAK HR FACTOR		0.250			0.625			0.625			0.607		0.825					
	APP/DEPART	1	/	2	5	/	0	10	/	16	17	/	15	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

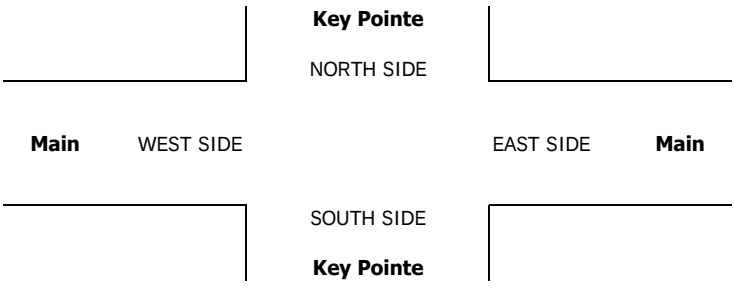
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.750					
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	1	1	0	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%						
	APP/DEPART	0	/	0	0	/	1	2	/	2	2	/	1	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	0	0	0	0	2	0	1	0	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.375					
	APP/DEPART	0	/	0	0	/	1	2	/	2	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

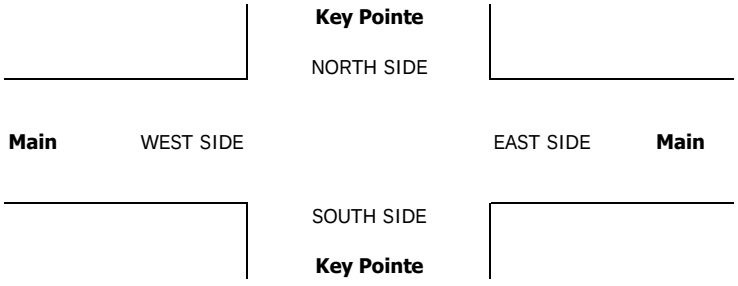
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	Key Pointe	LOCATION #:	5
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Key Pointe			SOUTHBOUND Key Pointe			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 1	NR 1	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM																		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:30 AM	0	0	0	2	0	0	0	2	0	0	0	0	4	0	0	0	0	0
7:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	1	1	0	0	0	1	3	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	2	0	0	0	1	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	2	0	0	1	2	5	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
VOLUMES	0	0	0	3	0	0	1	10	0	0	3	5	22	0	0	0	0	0
APPROACH %	0%	0%	0%	100%	0%	0%	9%	91%	0%	0%	38%	63%						
APP/DEPART	0	/	6	3	/	0	11	/	13	8	/	3	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	0	0	0	0	0	0	1	6	0	0	2	4	13					
APPROACH %	0%	0%	0%	0%	0%	0%	14%	86%	0%	0%	33%	67%						
PEAK HR FACTOR		0.000			0.000			0.875			0.500		0.650					
APP/DEPART	0	/	5	0	/	0	7	/	6	6	/	2	0					
PM																		
4:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	0	0	2	0	3	0	0	0	0	0
4:30 PM	0	0	0	1	0	0	0	1	0	0	2	0	4	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
VOLUMES	0	1	0	2	0	0	1	6	0	0	7	2	19	0	0	0	0	0
APPROACH %	0%	100%	0%	100%	0%	0%	14%	86%	0%	0%	78%	22%						
APP/DEPART	1	/	4	2	/	0	7	/	8	9	/	7	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	0	1	0	1	0	0	1	2	0	0	2	2	9					
APPROACH %	0%	100%	0%	100%	0%	0%	33%	67%	0%	0%	50%	50%						
PEAK HR FACTOR		0.250			0.250			0.750			0.500		0.563					
APP/DEPART	1	/	4	1	/	0	3	/	3	4	/	2	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
Tue, May 17, 22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
	EAST & WEST:	Main	CONTROL:	SIGNAL

NOTES:

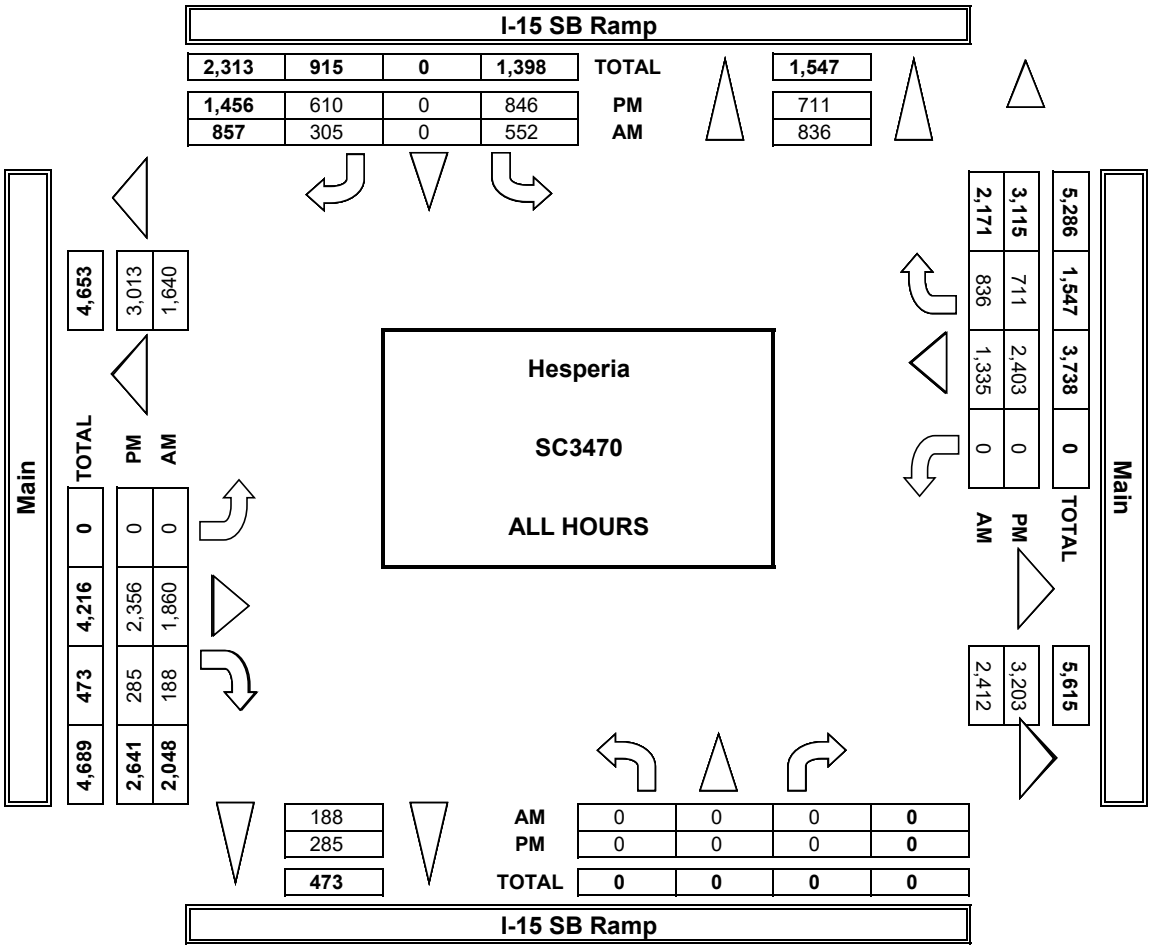
AM / PM / MD / OTHER / OTHER

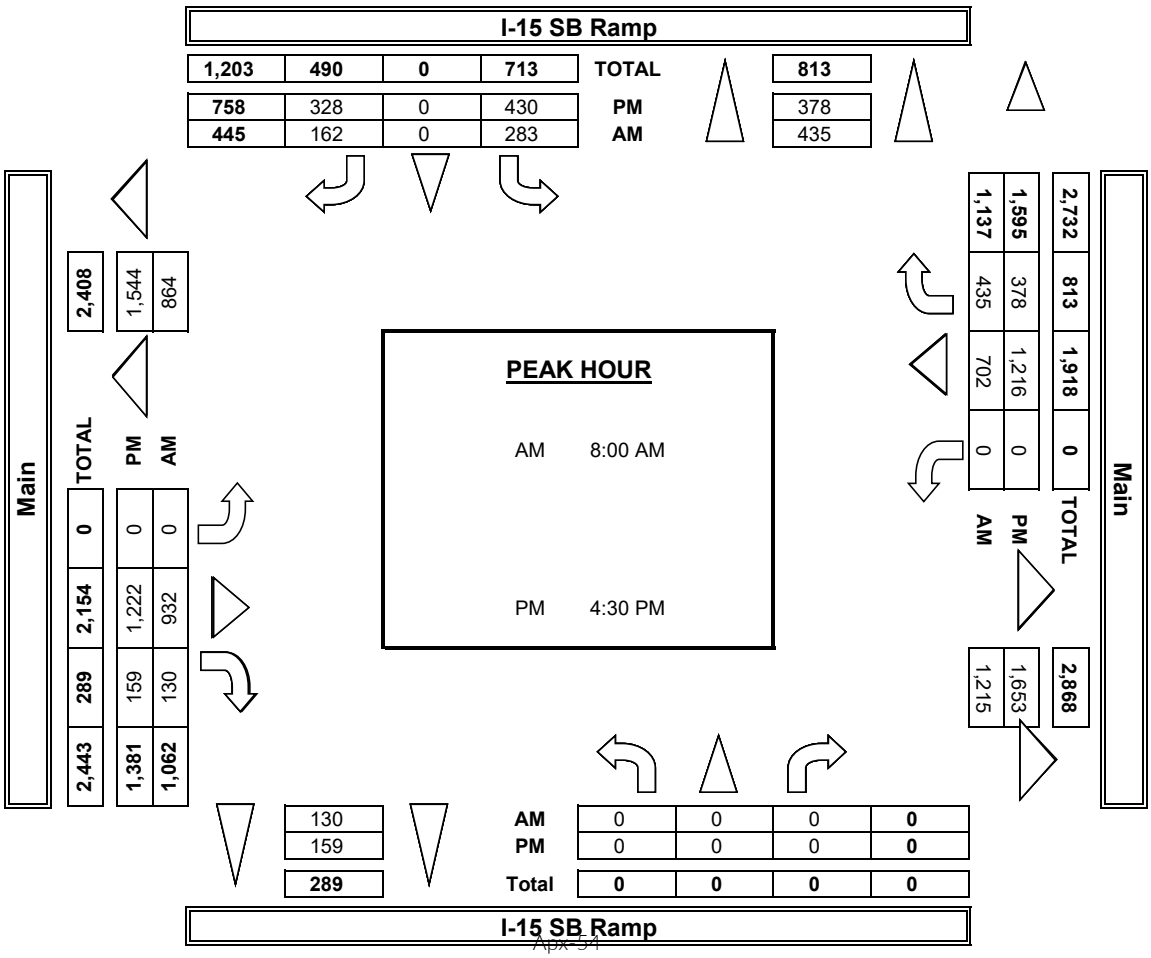
▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	59	0	26	0	200	19	0	117	102	523
	7:15 AM	0	0	0	62	0	31	0	238	0	0	155	107	593
	7:30 AM	0	0	0	66	0	36	0	233	16	0	183	105	639
	7:45 AM	0	0	0	82	0	50	0	257	23	0	178	87	677
	8:00 AM	0	0	0	59	0	27	0	241	39	0	144	103	613
	8:15 AM	0	0	0	77	0	46	0	236	30	0	165	118	672
	8:30 AM	0	0	0	66	0	49	0	223	29	0	184	108	659
	8:45 AM	0	0	0	81	0	40	0	232	32	0	209	106	700
	VOLUMES	0	0	0	552	0	305	0	1,860	188	0	1,335	836	5,076
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	91%	9%	0%	61%	39%	
	APP/DEPART	0	/	836	857	/	188	2,048	/	2,412	2,171	/	1,640	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	283	0	162	0	932	130	0	702	435	2,644
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	88%	12%	0%	62%	38%	
	PEAK HR FACTOR		0.000			0.904			0.948			0.902		0.944
	APP/DEPART	0	/	435	445	/	130	1,062	/	1,215	1,137	/	864	0
PM	4:00 PM	0	0	0	127	0	67	0	286	21	0	321	93	915
	4:15 PM	0	0	0	101	0	71	0	292	31	0	324	78	897
	4:30 PM	0	0	0	95	0	80	0	302	45	0	323	96	941
	4:45 PM	0	0	0	123	0	88	0	277	32	0	302	93	915
	5:00 PM	0	0	0	102	0	82	0	319	46	0	277	99	925
	5:15 PM	0	0	0	110	0	78	0	324	36	0	314	90	952
	5:30 PM	0	0	0	99	0	83	0	277	41	0	280	92	872
	5:45 PM	0	0	0	89	0	61	0	279	33	0	262	70	794
	VOLUMES	0	0	0	846	0	610	0	2,356	285	0	2,403	711	7,212
	APPROACH %	0%	0%	0%	58%	0%	42%	0%	89%	11%	0%	77%	23%	
	APP/DEPART	0	/	711	1,456	/	285	2,641	/	3,203	3,115	/	3,013	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	430	0	328	0	1,222	159	0	1,216	378	3,734
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	88%	12%	0%	76%	24%	
	PEAK HR FACTOR		0.000			0.898			0.946			0.952		0.981
	APP/DEPART	0	/	378	758	/	159	1,381	/	1,653	1,595	/	1,544	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	60	0	28	0	222	23	0	130	114	575
	7:15 AM	0	0	0	65	0	40	0	256	0	0	169	125	655
	7:30 AM	0	0	0	69	0	47	0	247	19	0	194	121	697
	7:45 AM	0	0	0	89	0	55	0	271	24	0	191	103	732
	8:00 AM	0	0	0	66	0	29	0	261	47	0	160	113	675
	8:15 AM	0	0	0	83	0	49	0	257	35	0	176	138	737
	8:30 AM	0	0	0	71	0	54	0	243	34	0	199	126	727
	8:45 AM	0	0	0	91	0	46	0	249	38	0	223	134	779
	VOLUMES	0	0	0	593	0	347	0	2,005	219	0	1,441	972	5,575
	APPROACH %	0%	0%	0%	63%	0%	37%	0%	90%	10%	0%	60%	40%	
	APP/DEPART	0	/	972	939	/	219	2,223	/	2,597	2,413	/	1,787	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	0	0	0	310	0	177	0	1,010	153	0	758	511	2,917
	APPROACH %	0%	0%	0%	64%	0%	36%	0%	87%	13%	0%	60%	40%	
	PEAK HR FACTOR		0.000			0.894			0.947			0.889		0.936
	APP/DEPART	0	/	511	487	/	153	1,163	/	1,320	1,268	/	934	0
PM	4:00 PM	0	0	0	132	0	78	0	298	25	0	328	106	964
	4:15 PM	0	0	0	112	0	72	0	302	34	0	341	85	946
	4:30 PM	0	0	0	100	0	85	0	313	49	0	340	108	994
	4:45 PM	0	0	0	127	0	91	0	292	37	0	309	105	960
	5:00 PM	0	0	0	104	0	91	0	329	53	0	280	107	962
	5:15 PM	0	0	0	113	0	84	0	339	39	0	327	99	1,000
	5:30 PM	0	0	0	102	0	98	0	292	45	0	290	95	921
	5:45 PM	0	0	0	94	0	64	0	295	36	0	274	74	837
	VOLUMES	0	0	0	882	0	661	0	2,458	316	0	2,487	778	7,581
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	76%	24%	
	APP/DEPART	0	/	778	1,543	/	316	2,774	/	3,340	3,265	/	3,148	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	0	0	443	0	350	0	1,273	177	0	1,255	418	3,915
	APPROACH %	0%	0%	0%	56%	0%	44%	0%	88%	12%	0%	75%	25%	
	PEAK HR FACTOR		0.000			0.911			0.950			0.934		0.979
	APP/DEPART	0	/	418	793	/	177	1,449	/	1,716	1,673	/	1,605	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

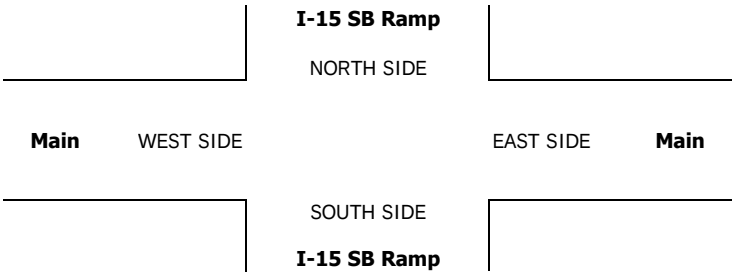
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	58	0	25	0	181	15	0	104	89	472	0	0	0	0	0
	7:15 AM	0	0	0	59	0	25	0	219	0	0	137	90	530	0	0	0	0	0
	7:30 AM	0	0	0	60	0	29	0	219	14	0	173	90	585	0	0	0	0	0
	7:45 AM	0	0	0	72	0	43	0	240	22	0	161	74	612	0	0	0	0	0
	8:00 AM	0	0	0	50	0	24	0	218	33	0	124	89	538	0	0	0	0	0
	8:15 AM	0	0	0	72	0	44	0	216	26	0	151	100	609	0	0	0	0	0
	8:30 AM	0	0	0	58	0	44	0	200	25	0	168	90	585	0	0	0	0	0
	8:45 AM	0	0	0	72	0	33	0	214	27	0	189	84	619	0	0	0	0	0
	VOLUMES	0	0	0	501	0	267	0	1,707	162	0	1,207	706	4,550	0	0	0	0	0
	APPROACH %	0%	0%	0%	65%	0%	35%	0%	91%	9%	0%	63%	37%						
	APP/DEPART	0	/	706	768	/	162	1,869	/	2,208	1,913	/	1,474	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	252	0	145	0	848	111	0	632	363	2,351					
	APPROACH %	0%	0%	0%	63%	0%	37%	0%	88%	12%	0%	64%	36%						
	PEAK HR FACTOR		0.000			0.856			0.955			0.911		0.950					
	APP/DEPART	0	/	363	397	/	111	959	/	1,100	995	/	777	0					
PM	4:00 PM	0	0	0	122	0	60	0	276	16	0	314	81	869	0	0	0	0	0
	4:15 PM	0	0	0	91	0	69	0	280	28	0	305	73	846	0	0	0	0	0
	4:30 PM	0	0	0	91	0	77	0	289	41	0	306	84	888	0	0	0	0	0
	4:45 PM	0	0	0	120	0	86	0	260	29	0	294	84	873	0	0	0	1	1
	5:00 PM	0	0	0	99	0	77	0	307	40	0	273	91	887	0	0	0	0	0
	5:15 PM	0	0	0	108	0	73	0	305	32	0	299	78	895	0	0	0	0	0
	5:30 PM	0	0	0	95	0	75	0	261	37	0	268	87	823	0	0	0	0	0
	5:45 PM	0	0	0	85	0	59	0	266	30	0	253	66	759	0	0	0	0	0
	VOLUMES	0	0	0	811	0	576	0	2,244	253	0	2,312	644	6,841	0	0	0	1	1
	APPROACH %	0%	0%	0%	58%	0%	42%	0%	90%	10%	0%	78%	22%						
	APP/DEPART	0	/	644	1,387	/	253	2,497	/	3,056	2,957	/	2,888	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	418	0	313	0	1,161	142	0	1,172	337	3,544					
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	78%	22%						
	PEAK HR FACTOR		0.000			0.887			0.939			0.968		0.990					
	APP/DEPART	0	/	337	731	/	142	1,303	/	1,580	1,510	/	1,485	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	1	0	0	0	9	3	0	7	9	29	0	0	0	0	0
	7:15 AM	0	0	0	2	0	2	0	11	0	0	14	10	39	0	0	0	0	0
	7:30 AM	0	0	0	6	0	2	0	6	0	0	4	9	27	0	0	0	0	0
	7:45 AM	0	0	0	8	0	6	0	12	0	0	13	7	46	0	0	0	0	0
	8:00 AM	0	0	0	4	0	3	0	15	3	0	12	12	49	0	0	0	0	0
	8:15 AM	0	0	0	2	0	1	0	10	2	0	10	11	36	0	0	0	0	0
	8:30 AM	0	0	0	7	0	2	0	14	2	0	8	12	45	0	0	0	0	0
	8:45 AM	0	0	0	5	0	5	0	10	3	0	17	10	50	0	0	0	0	0
	VOLUMES	0	0	0	35	0	21	0	87	13	0	85	80	321	0	0	0	0	0
	APPROACH %	0%	0%	0%	63%	0%	38%	0%	87%	13%	0%	52%	48%						
	APP/DEPART	0	/	80	56	/	13	100	/	122	165	/	106	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	18	0	11	0	49	10	0	47	45	180					
	APPROACH %	0%	0%	0%	62%	0%	38%	0%	83%	17%	0%	51%	49%						
	PEAK HR FACTOR		0.000			0.725			0.819			0.852		0.900					
	APP/DEPART	0	/	45	29	/	10	59	/	67	92	/	58	0					
PM	4:00 PM	0	0	0	3	0	1	0	3	3	0	3	7	20	0	0	0	0	0
	4:15 PM	0	0	0	4	0	2	0	9	2	0	12	2	31	0	0	0	0	0
	4:30 PM	0	0	0	2	0	1	0	8	2	0	8	7	28	0	0	0	0	0
	4:45 PM	0	0	0	1	0	0	0	12	1	0	5	4	23	0	0	0	0	0
	5:00 PM	0	0	0	3	0	1	0	8	3	0	3	5	23	0	0	0	0	0
	5:15 PM	0	0	0	0	0	2	0	15	3	0	11	10	41	0	0	0	0	0
	5:30 PM	0	0	0	3	0	1	0	9	2	0	8	4	27	0	0	0	0	0
	5:45 PM	0	0	0	1	0	0	0	6	2	0	2	2	13	0	0	0	0	0
	VOLUMES	0	0	0	17	0	8	0	70	18	0	52	41	206	0	0	0	0	0
	APPROACH %	0%	0%	0%	68%	0%	32%	0%	80%	20%	0%	56%	44%						
	APP/DEPART	0	/	41	25	/	18	88	/	87	93	/	60	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	6	0	4	0	43	9	0	27	26	115					
	APPROACH %	0%	0%	0%	60%	0%	40%	0%	83%	17%	0%	51%	49%						
	PEAK HR FACTOR		0.000			0.625			0.722			0.631		0.701					
	APP/DEPART	0	/	26	10	/	9	52	/	49	53	/	31	0					

I-15 SB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 SB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

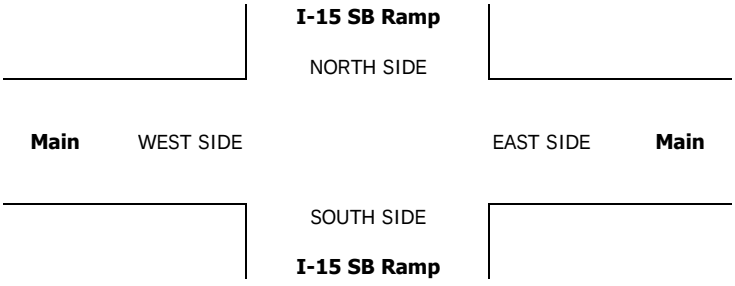
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	2	0	0	2	1	5	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	3	0	0	0	1	4	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	1	0	3	1	6	0	0	0	0	0
	7:45 AM	0	0	0	1	0	0	0	1	1	0	2	0	5	0	0	0	0	0
	8:00 AM	0	0	0	2	0	0	0	3	0	0	3	0	8	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
	8:30 AM	0	0	0	0	0	2	0	2	0	0	2	0	6	0	0	0	0	0
	8:45 AM	0	0	0	1	0	1	0	2	0	0	0	1	5	0	0	0	0	0
	VOLUMES	0	0	0	4	0	3	0	16	2	0	14	4	43	0	0	0	0	0
	APPROACH %	0%	0%	0%	57%	0%	43%	0%	89%	11%	0%	78%	22%						
	APP/DEPART	0	/	4	7	/	2	18	/	20	18	/	17	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	3	0	3	0	9	0	0	7	1	23					
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	100%	0%	0%	88%	13%						
	PEAK HR FACTOR		0.000			0.750			0.750			0.667		0.719					
	APP/DEPART	0	/	1	6	/	0	9	/	12	8	/	10	0					
PM	4:00 PM	0	0	0	1	0	2	0	2	2	0	1	1	9	0	0	0	0	0
	4:15 PM	0	0	0	2	0	0	0	0	0	0	1	0	3	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	1	0	3	2	6	0	0	0	0	0
	4:45 PM	0	0	0	0	0	1	0	1	0	0	2	0	4	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	1	0	0	1	3	0	0	0	0	0
	5:15 PM	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	1	0	0	0	2	1	0	2	1	7	0	0	0	0	0
	5:45 PM	0	0	0	2	0	0	0	1	0	0	2	1	6	0	0	0	0	0
	VOLUMES	0	0	0	7	0	3	0	8	5	0	11	6	40	0	0	0	0	0
	APPROACH %	0%	0%	0%	70%	0%	30%	0%	62%	38%	0%	65%	35%						
	APP/DEPART	0	/	6	10	/	5	13	/	15	17	/	14	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	1	0	1	0	3	2	0	5	3	15					
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	60%	40%	0%	63%	38%						
	PEAK HR FACTOR		0.000			0.500			0.625			0.400		0.625					
	APP/DEPART	0	/	3	2	/	2	5	/	4	8	/	6	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

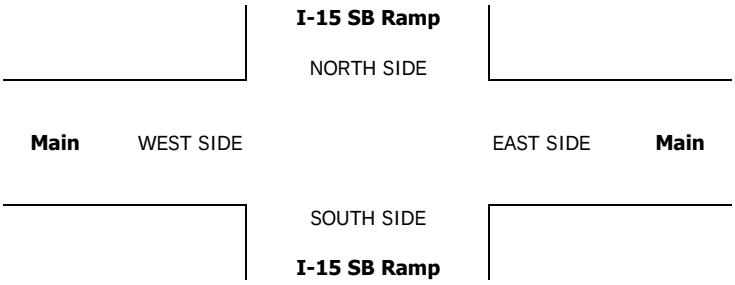
CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	1	0	7	1	0	3	3	15	0	0	0	0	0
	7:15 AM	0	0	0	1	0	4	0	4	0	0	3	6	18	0	0	0	0	0
	7:30 AM	0	0	0	0	0	5	0	3	1	0	3	5	17	0	0	0	0	0
	7:45 AM	0	0	0	1	0	1	0	3	0	0	2	6	13	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	4	3	0	2	2	11	0	0	0	0	0
	8:15 AM	0	0	0	2	0	1	0	6	2	0	2	7	20	0	0	0	0	0
	8:30 AM	0	0	0	0	0	1	0	4	2	0	3	6	16	0	0	0	0	0
	8:45 AM	0	0	0	3	0	1	0	4	2	0	2	11	23	0	0	0	0	0
	VOLUMES	0	0	0	7	0	14	0	35	11	0	20	46	133	0	0	0	0	0
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	76%	24%	0%	30%	70%						
	APP/DEPART	0	/	46	21	/	11	46	/	42	66	/	34	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	5	0	3	0	18	9	0	9	26	70					
	APPROACH %	0%	0%	0%	63%	0%	38%	0%	67%	33%	0%	26%	74%						
	PEAK HR FACTOR		0.000			0.500			0.844			0.673		0.761					
	APP/DEPART	0	/	26	8	/	9	27	/	23	35	/	12	0					
PM	4:00 PM	0	0	0	1	0	4	0	3	0	0	1	4	13	0	0	0	0	0
	4:15 PM	0	0	0	3	0	0	0	2	1	0	4	3	13	0	0	0	0	0
	4:30 PM	0	0	0	2	0	2	0	2	1	0	4	3	14	0	0	0	0	0
	4:45 PM	0	0	0	1	0	1	0	4	2	0	1	5	14	0	0	0	0	0
	5:00 PM	0	0	0	0	0	4	0	2	2	0	0	2	10	0	0	0	0	0
	5:15 PM	0	0	0	1	0	2	0	3	0	0	3	2	11	0	0	0	0	0
	5:30 PM	0	0	0	0	0	7	0	3	1	0	2	0	13	0	0	0	0	0
	5:45 PM	0	0	0	1	0	1	0	6	1	0	4	1	14	0	0	0	0	0
	VOLUMES	0	0	0	9	0	21	0	25	8	0	19	20	102	0	0	0	0	0
	APPROACH %	0%	0%	0%	30%	0%	70%	0%	76%	24%	0%	49%	51%						
	APP/DEPART	0	/	20	30	/	8	33	/	34	39	/	40	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	4	0	9	0	11	5	0	8	12	49					
	APPROACH %	0%	0%	0%	31%	0%	69%	0%	69%	31%	0%	40%	60%						
	PEAK HR FACTOR		0.000			0.813			0.667			0.714		0.875					
	APP/DEPART	0	/	12	13	/	5	16	/	15	20	/	17	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.500			0.250		0.750					
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	1	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	1	0	2	0	1	1	0	0	0	5	0	0	0	0	0
	APPROACH %	0%	0%	0%	33%	0%	67%	0%	50%	50%	0%	0%	0%						
	APP/DEPART	0	/	0	3	/	1	2	/	2	0	/	2	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	0	0	1	0	1	1	0	0	0	3					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.500			0.000		0.375					
	APP/DEPART	0	/	0	1	/	1	2	/	1	0	/	1	0					

I-15 SB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 SB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

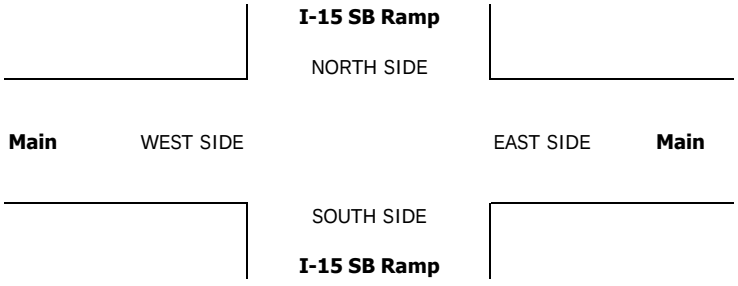
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 SB Ramp	LOCATION #:	2
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 SB Ramp			SOUTHBOUND I-15 SB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:00 AM	0	0	0	3	0	0	0	1	0	0	2	0	6	0	0	0	0	0
	8:15 AM	0	0	0	1	0	0	0	2	0	0	0	0	3	0	0	0	0	0
	8:30 AM	0	0	0	1	0	0	0	2	0	0	3	0	6	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
	VOLUMES	0	0	0	5	0	0	0	13	0	0	8	0	26	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	5	/	0	13	/	18	8	/	8	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	5	0	0	0	6	0	0	6	0	17					
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.417			0.750			0.500		0.708					
	APP/DEPART	0	/	0	5	/	0	6	/	11	6	/	6	0					
PM	4:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	3	0	0	2	0	5	0	0	0	0	0
	4:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	VOLUMES	0	0	0	1	0	0	0	8	0	0	9	0	18	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	1	/	0	8	/	9	9	/	9	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	1	0	0	0	3	0	0	4	0	8					
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.250			0.250			0.500		0.400					
	APP/DEPART	0	/	0	1	/	0	3	/	4	4	/	4	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:					
Tue, May 17, 22	LOCATION:	Hesperia	PROJECT #:	SC3470	
	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3	
	EAST & WEST:	Main	CONTROL:	SIGNAL	

NOTES:

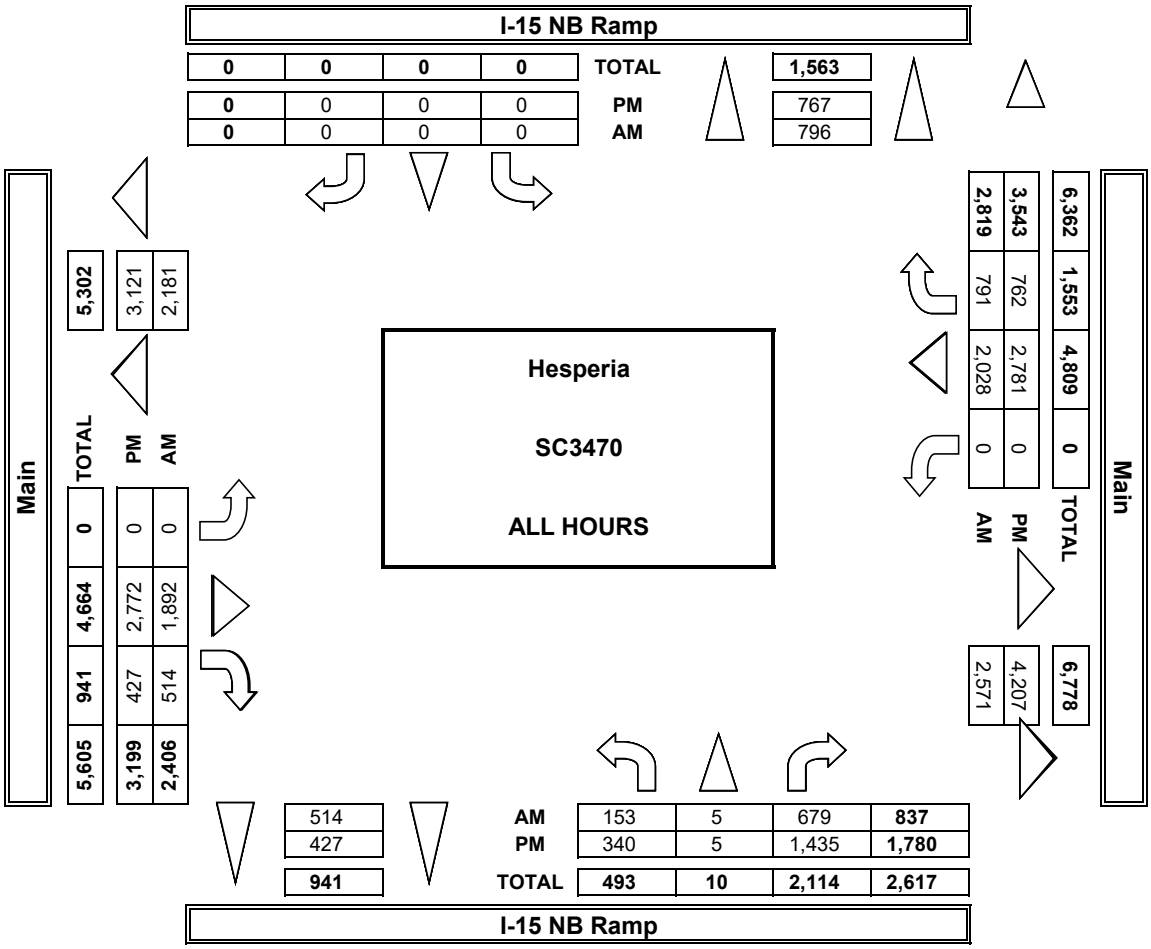
AM / PM / MD / OTHER / OTHER

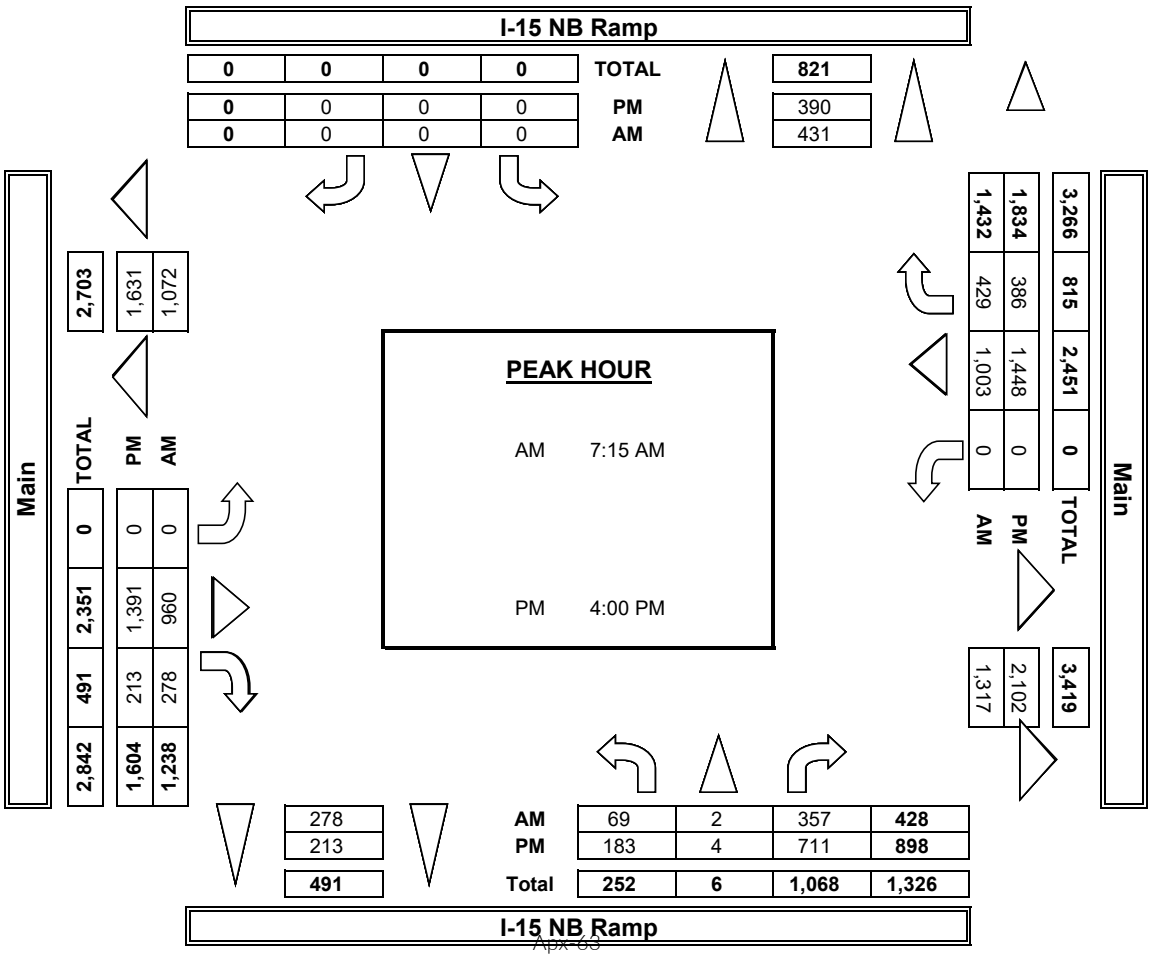
▲ N ◄ W E ► S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	24	0	91	0	0	0	0	210	49	0	195	92	661
	7:15 AM	17	1	97	0	0	0	0	221	79	0	245	118	778
	7:30 AM	11	0	103	0	0	0	0	229	70	0	277	112	802
	7:45 AM	20	1	85	0	0	0	0	273	66	0	245	117	807
	8:00 AM	21	0	72	0	0	0	0	237	63	0	236	82	711
	8:15 AM	18	0	79	0	0	0	0	250	57	0	265	79	748
	8:30 AM	18	1	81	0	0	0	0	217	72	0	274	90	753
	8:45 AM	24	2	71	0	0	0	0	255	58	0	291	101	802
	VOLUMES	153	5	679	0	0	0	0	1,892	514	0	2,028	791	6,062
	APPROACH %	18%	1%	81%	0%	0%	0%	0%	79%	21%	0%	72%	28%	
	APP/DEPART	837	/	796	0	/	514	2,406	/	2,571	2,819	/	2,181	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	69	2	357	0	0	0	0	960	278	0	1,003	429	3,098
	APPROACH %	16%	0%	83%	0%	0%	0%	0%	78%	22%	0%	70%	30%	
	PEAK HR FACTOR		0.930			0.000			0.913			0.920		0.960
	APP/DEPART	428	/	431	0	/	278	1,238	/	1,317	1,432	/	1,072	0
PM	4:00 PM	49	1	182	0	0	0	0	363	50	0	365	104	1,114
	4:15 PM	48	2	183	0	0	0	0	338	55	0	354	99	1,079
	4:30 PM	45	1	180	0	0	0	0	341	56	0	374	96	1,093
	4:45 PM	41	0	166	0	0	0	0	349	52	0	355	87	1,050
	5:00 PM	36	0	163	0	0	0	0	355	66	0	340	98	1,058
	5:15 PM	32	0	169	0	0	0	0	376	58	0	372	100	1,107
	5:30 PM	51	0	200	0	0	0	0	320	52	0	327	97	1,047
	5:45 PM	38	1	192	0	0	0	0	330	38	0	294	81	974
	VOLUMES	340	5	1,435	0	0	0	0	2,772	427	0	2,781	762	8,522
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	87%	13%	0%	78%	22%	
	APP/DEPART	1,780	/	767	0	/	427	3,199	/	4,207	3,543	/	3,121	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	183	4	711	0	0	0	0	1,391	213	0	1,448	386	4,336
	APPROACH %	20%	0%	79%	0%	0%	0%	0%	87%	13%	0%	79%	21%	
	PEAK HR FACTOR		0.964			0.000			0.971			0.976		0.973
	APP/DEPART	898	/	390	0	/	213	1,604	/	2,102	1,834	/	1,631	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

	NOTES:											
PCE Adjusted	Class	1	2	3	4	5	6			AM / PM / MD / OTHER / OTHER	▲ N / ◄ W / E ► / S ▼	
	Factor	1	1.5	2	3	2	2					

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main			
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	27	0	106	0	0	0	0	223	59	0	216	99	729
	7:15 AM	21	1	111	0	0	0	0	236	85	0	274	130	856
	7:30 AM	13	0	120	0	0	0	0	241	75	0	302	119	869
	7:45 AM	27	2	96	0	0	0	0	287	73	0	266	127	877
	8:00 AM	21	0	85	0	0	0	0	257	70	0	262	85	779
	8:15 AM	20	0	95	0	0	0	0	267	67	0	294	88	831
	8:30 AM	20	2	98	0	0	0	0	231	83	0	305	97	835
	8:45 AM	25	2	78	0	0	0	0	277	63	0	332	110	885
	VOLUMES	173	6	787	0	0	0	0	2,018	573	0	2,250	854	6,660
	APPROACH %	18%	1%	82%	0%	0%	0%	0%	78%	22%	0%	72%	28%	
	APP/DEPART	965	/	860	0	/	573	2,591	/	2,805	3,104	/	2,423	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	82	3	411	0	0	0	0	1,021	303	0	1,103	460	3,381
	APPROACH %	16%	1%	83%	0%	0%	0%	0%	77%	23%	0%	71%	29%	
	PEAK HR FACTOR		0.930			0.000			0.919			0.930		0.964
	APP/DEPART	495	/	463	0	/	303	1,323	/	1,431	1,563	/	1,185	0
PM	4:00 PM	49	1	205	0	0	0	0	378	51	0	384	111	1,179
	4:15 PM	52	2	198	0	0	0	0	354	60	0	375	102	1,141
	4:30 PM	46	1	192	0	0	0	0	355	59	0	402	98	1,151
	4:45 PM	44	0	178	0	0	0	0	362	58	0	371	93	1,105
	5:00 PM	37	0	175	0	0	0	0	363	70	0	350	104	1,097
	5:15 PM	35	0	195	0	0	0	0	393	59	0	391	103	1,175
	5:30 PM	54	0	224	0	0	0	0	334	56	0	337	102	1,106
	5:45 PM	43	1	201	0	0	0	0	346	43	0	305	83	1,021
	VOLUMES	359	5	1,567	0	0	0	0	2,883	454	0	2,913	795	8,974
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	86%	14%	0%	79%	21%	
	APP/DEPART	1,930	/	800	0	/	454	3,337	/	4,450	3,708	/	3,272	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	190	4	773	0	0	0	0	1,449	227	0	1,531	404	4,576
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	86%	14%	0%	79%	21%	
	PEAK HR FACTOR		0.948			0.000			0.976			0.969		0.970
	APP/DEPART	967	/	408	0	/	227	1,675	/	2,221	1,935	/	1,721	0

INTERSECTION TURNING MOVEMENT COUNTS

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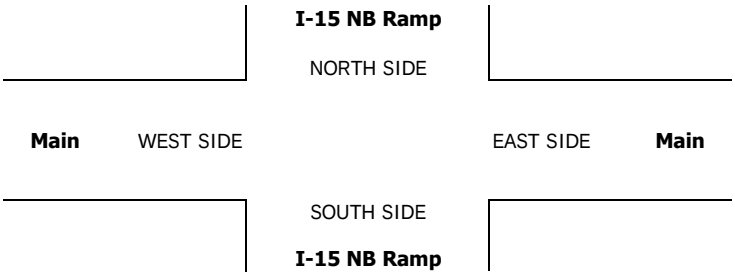
DATE:					
5/17/22	LOCATION:	Hesperia	PROJECT #:	SC3470	
TUESDAY	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3	
	EAST & WEST:	Main	CONTROL:	SIGNAL	

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	18	0	72	0	0	0	0	197	42	0	175	86	590	0	0	0	0	0
	7:15 AM	13	1	78	0	0	0	0	207	71	0	214	103	687	0	0	0	0	0
	7:30 AM	8	0	86	0	0	0	0	215	64	0	255	106	734	0	0	0	0	0
	7:45 AM	12	0	70	0	0	0	0	253	59	0	223	106	723	0	0	0	0	0
	8:00 AM	21	0	59	0	0	0	0	211	57	0	202	79	629	0	0	0	0	0
	8:15 AM	15	0	62	0	0	0	0	232	50	0	236	70	665	0	0	0	0	0
	8:30 AM	17	0	65	0	0	0	0	200	58	0	241	83	664	0	0	0	0	0
	8:45 AM	23	2	61	0	0	0	0	233	53	0	250	90	712	0	0	0	0	0
	VOLUMES	127	3	553	0	0	0	0	1,748	454	0	1,796	723	5,404	0	0	0	0	0
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	79%	21%	0%	71%	29%						
	APP/DEPART	683	/	726	0	/	454	2,202	/	2,301	2,519	/	1,923	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	54	1	293	0	0	0	0	886	251	0	894	394	2,773					
	APPROACH %	16%	0%	84%	0%	0%	0%	0%	78%	22%	0%	69%	31%						
	PEAK HR FACTOR		0.926			0.000			0.911			0.892		0.944					
	APP/DEPART	348	/	395	0	/	251	1,137	/	1,179	1,288	/	948	0					
PM	4:00 PM	49	1	162	0	0	0	0	350	48	0	346	96	1,052	0	0	0	0	0
	4:15 PM	44	2	169	0	0	0	0	321	50	0	334	95	1,015	0	0	0	0	0
	4:30 PM	44	1	166	0	0	0	0	327	53	0	346	93	1,030	0	0	0	0	0
	4:45 PM	39	0	144	0	0	0	0	334	47	0	340	81	985	0	0	0	0	0
	5:00 PM	35	0	150	0	0	0	0	344	62	0	329	93	1,013	0	0	0	0	0
	5:15 PM	29	0	148	0	0	0	0	356	57	0	348	96	1,034	0	0	0	0	0
	5:30 PM	48	0	176	0	0	0	0	304	48	0	313	93	982	0	0	0	0	0
	5:45 PM	34	1	177	0	0	0	0	316	35	0	285	78	926	0	0	0	0	0
	VOLUMES	322	5	1,292	0	0	0	0	2,652	400	0	2,641	725	8,037	0	0	0	0	0
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	87%	13%	0%	78%	22%						
	APP/DEPART	1,619	/	730	0	/	400	3,052	/	3,944	3,366	/	2,963	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	176	4	641	0	0	0	0	1,332	198	0	1,366	365	4,082					
	APPROACH %	21%	0%	78%	0%	0%	0%	0%	87%	13%	0%	79%	21%						
	PEAK HR FACTOR		0.955			0.000			0.961			0.979		0.970					
	APP/DEPART	821	/	369	0	/	198	1,530	/	1,973	1,731	/	1,542	0					



INTERSECTION TURNING MOVEMENT COUNTS

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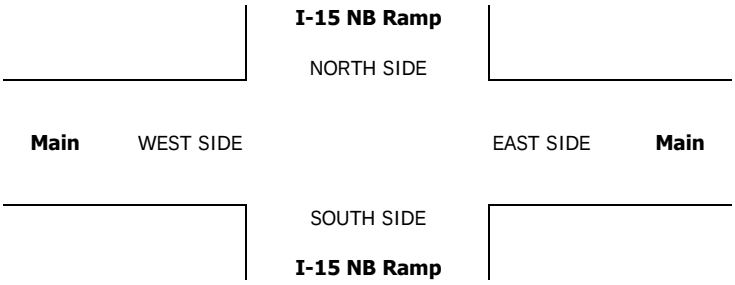
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	6	0	15	0	0	0	0	7	3	0	10	2	43	0	0	0	0	0
	7:15 AM	3	0	15	0	0	0	0	7	6	0	21	12	64	0	0	0	0	0
	7:30 AM	2	0	10	0	0	0	0	8	4	0	11	3	38	0	0	0	0	0
	7:45 AM	6	1	13	0	0	0	0	16	4	0	14	7	61	0	0	0	0	0
	8:00 AM	0	0	9	0	0	0	0	16	3	0	24	2	54	0	0	0	0	0
	8:15 AM	3	0	12	0	0	0	0	10	2	0	18	6	51	0	0	0	0	0
	8:30 AM	0	1	10	0	0	0	0	10	11	0	20	4	56	0	0	0	0	0
	8:45 AM	1	0	9	0	0	0	0	12	3	0	26	7	58	0	0	0	0	0
	VOLUMES	21	2	93	0	0	0	0	86	36	0	144	43	425	0	0	0	0	0
	APPROACH %	18%	2%	80%	0%	0%	0%	0%	70%	30%	0%	77%	23%						
	APP/DEPART	116	/	45	0	/	36	122	/	179	187	/	165	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	11	1	47	0	0	0	0	47	17	0	70	24	217					
	APPROACH %	19%	2%	80%	0%	0%	0%	0%	73%	27%	0%	74%	26%						
	PEAK HR FACTOR		0.738			0.000			0.800			0.712		0.848					
	APP/DEPART	59	/	25	0	/	17	64	/	94	94	/	81	0					
PM	4:00 PM	0	0	10	0	0	0	0	4	2	0	10	6	32	0	0	0	0	0
	4:15 PM	3	0	7	0	0	0	0	10	3	0	11	2	36	0	0	0	0	0
	4:30 PM	0	0	10	0	0	0	0	9	1	0	15	3	38	0	0	0	0	0
	4:45 PM	1	0	20	0	0	0	0	10	3	0	8	4	46	0	0	0	0	0
	5:00 PM	1	0	9	0	0	0	0	9	2	0	7	2	30	0	0	0	0	0
	5:15 PM	2	0	10	0	0	0	0	14	1	0	19	3	49	0	0	0	0	0
	5:30 PM	2	0	15	0	0	0	0	9	3	0	10	2	41	0	0	0	0	0
	5:45 PM	2	0	14	0	0	0	0	7	0	0	2	3	28	0	0	0	0	0
	VOLUMES	11	0	95	0	0	0	0	72	15	0	82	25	300	0	0	0	0	0
	APPROACH %	10%	0%	90%	0%	0%	0%	0%	83%	17%	0%	77%	23%						
	APP/DEPART	106	/	25	0	/	15	87	/	167	107	/	93	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	4	0	47	0	0	0	0	33	9	0	44	15	152					
	APPROACH %	8%	0%	92%	0%	0%	0%	0%	79%	21%	0%	75%	25%						
	PEAK HR FACTOR		0.607			0.000			0.808			0.819		0.826					
	APP/DEPART	51	/	15	0	/	9	42	/	80	59	/	48	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	1	0	0	0	0	2	0	0	3	2	8	0	0	0	0	0
	7:15 AM	0	0	2	0	0	0	0	2	1	0	1	0	6	0	0	0	0	0
	7:30 AM	1	0	2	0	0	0	0	0	1	0	3	1	8	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	1	0	2	1	5	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	4	1	0	3	0	8	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	1	1	0	2	0	4	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	2	0	0	2	1	5	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	2	1	0	1	0	4	0	0	0	0	0
	VOLUMES	1	0	5	0	0	0	0	14	6	0	17	5	48	0	0	0	0	0
	APPROACH %	17%	0%	83%	0%	0%	0%	0%	70%	30%	0%	77%	23%						
	APP/DEPART	6	/	5	0	/	6	20	/	19	22	/	18	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	1	0	4	0	0	0	0	7	4	0	9	2	27					
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	64%	36%	0%	82%	18%						
	PEAK HR FACTOR		0.417			0.000			0.550			0.688		0.844					
	APP/DEPART	5	/	2	0	/	4	11	/	11	11	/	10	0					
PM	4:00 PM	0	0	2	0	0	0	0	3	0	0	2	0	7	0	0	0	0	0
	4:15 PM	0	0	3	0	0	0	0	2	0	0	1	0	6	0	0	0	0	0
	4:30 PM	0	0	1	0	0	0	0	0	0	0	5	0	6	0	0	0	0	0
	4:45 PM	0	0	1	0	0	0	0	1	0	0	2	0	4	0	0	0	0	0
	5:00 PM	0	0	1	0	0	0	0	1	0	0	1	0	3	0	0	0	0	0
	5:15 PM	0	0	1	0	0	0	0	2	0	0	0	1	4	0	0	0	0	0
	5:30 PM	0	0	2	0	0	0	0	3	0	0	3	0	8	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	2	1	0	3	0	6	0	0	0	0	0
	VOLUMES	0	0	11	0	0	0	0	14	1	0	17	1	44	0	0	0	0	0
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	93%	7%	0%	94%	6%						
	APP/DEPART	11	/	1	0	/	1	15	/	25	18	/	17	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	7	0	0	0	0	6	0	0	10	0	23					
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.583			0.000			0.500			0.500		0.821					
	APP/DEPART	7	/	0	0	/	0	6	/	13	10	/	10	0					

I-15 NB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 NB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	3	0	0	0	0	3	4	0	6	2	18	0	0	0	0	0
	7:15 AM	1	0	2	0	0	0	0	4	1	0	8	3	19	0	0	0	0	0
	7:30 AM	0	0	5	0	0	0	0	2	1	0	8	2	18	0	0	0	0	0
	7:45 AM	2	0	2	0	0	0	0	2	2	0	6	2	16	0	0	0	0	0
	8:00 AM	0	0	4	0	0	0	0	2	2	0	4	1	13	0	0	0	0	0
	8:15 AM	0	0	5	0	0	0	0	4	4	0	9	3	25	0	0	0	0	0
	8:30 AM	1	0	6	0	0	0	0	2	2	0	8	2	21	0	0	0	0	0
	8:45 AM	0	0	1	0	0	0	0	6	1	0	13	1	22	0	0	0	0	0
	VOLUMES	4	0	28	0	0	0	0	25	17	0	62	16	152	0	0	0	0	0
	APPROACH %	13%	0%	88%	0%	0%	0%	0%	60%	40%	0%	79%	21%						
	APP/DEPART	32	/	16	0	/	17	42	/	53	78	/	66	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	3	0	13	0	0	0	0	10	6	0	26	8	66					
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	63%	38%	0%	76%	24%						
	PEAK HR FACTOR		0.800			0.000			0.800			0.773		0.868					
	APP/DEPART	16	/	8	0	/	6	16	/	23	34	/	29	0					
PM	4:00 PM	0	0	8	0	0	0	0	4	0	0	5	2	19	0	0	0	0	0
	4:15 PM	1	0	4	0	0	0	0	4	1	0	6	0	16	0	0	0	0	0
	4:30 PM	0	0	3	0	0	0	0	4	0	0	7	0	14	0	0	0	0	0
	4:45 PM	1	0	0	0	0	0	0	3	2	0	5	2	13	0	0	0	0	0
	5:00 PM	0	0	3	0	0	0	0	1	1	0	2	2	9	0	0	0	0	0
	5:15 PM	1	0	10	0	0	0	0	4	0	0	4	0	19	0	0	0	0	0
	5:30 PM	1	0	7	0	0	0	0	2	1	0	1	2	14	0	0	0	0	0
	5:45 PM	2	0	1	0	0	0	0	5	2	0	3	0	13	0	0	0	0	0
	VOLUMES	6	0	36	0	0	0	0	27	7	0	33	8	117	0	0	0	0	0
	APPROACH %	14%	0%	86%	0%	0%	0%	0%	79%	21%	0%	80%	20%						
	APP/DEPART	42	/	8	0	/	7	34	/	63	41	/	39	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	2	0	15	0	0	0	0	15	3	0	23	4	62					
	APPROACH %	12%	0%	88%	0%	0%	0%	0%	83%	17%	0%	85%	15%						
	PEAK HR FACTOR		0.531			0.000			0.900			0.964		0.816					
	APP/DEPART	17	/	4	0	/	3	18	/	30	27	/	25	0					

I-15 NB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 NB Ramp

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

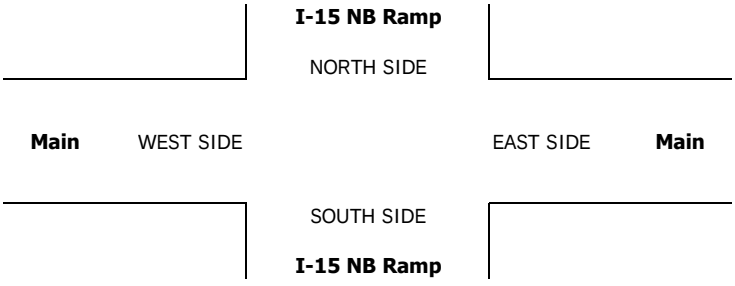
DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	2	0	0	1	1	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	50%	50%						
	APP/DEPART	0	/	1	0	/	0	2	/	2	2	/	1	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	1	2					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.500		0.500					
	APP/DEPART	0	/	1	0	/	0	0	/	0	2	/	1	0					
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	1	0	0	1	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	100%						
	APP/DEPART	0	/	1	0	/	1	2	/	1	1	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	1	2					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.250		0.250					
	APP/DEPART	0	/	1	0	/	0	1	/	1	1	/	0	0					



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Hesperia	PROJECT #:	SC3470
5/17/22	NORTH & SOUTH:	I-15 NB Ramp	LOCATION #:	3
TUESDAY	EAST & WEST:	Main	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND I-15 NB Ramp			SOUTHBOUND I-15 NB Ramp			EASTBOUND Main			WESTBOUND Main				U-TURNS				
LANES:	NL 1	NT 0.5	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	4	0	0	2	0	6	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	2	1	0	3	0	6	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	3	5	0	0	0	0	0
AM VOLUMES	0	0	0	0	0	0	0	17	1	0	8	3	29	0	0	0	0	0
AM APPROACH %	0%	0%	0%	0%	0%	0%	0%	94%	6%	0%	73%	27%						
AM APP/DEPART	0	/	3	0	/	1	18	/	17	11	/	8	0					
BEGIN PEAK HR		7:15 AM																
AM VOLUMES	0	0	0	0	0	0	0	10	0	0	3	0	13					
AM APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.000			0.625			0.375		0.542					
AM APP/DEPART	0	/	0	0	/	0	10	/	10	3	/	3	0					
4:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	1	0	2	1	4	0	0	0	0	0
4:30 PM	1	0	0	0	0	0	0	1	2	0	1	0	5	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
PM VOLUMES	1	0	1	0	0	0	0	6	3	0	8	2	21	0	0	0	0	0
PM APPROACH %	50%	0%	50%	0%	0%	0%	0%	67%	33%	0%	80%	20%						
PM APP/DEPART	2	/	2	0	/	3	9	/	7	10	/	9	0					
BEGIN PEAK HR		4:00 PM																
PM VOLUMES	1	0	1	0	0	0	0	4	3	0	5	1	15					
PM APPROACH %	50%	0%	50%	0%	0%	0%	0%	57%	43%	0%	83%	17%						
PEAK HR FACTOR		0.500			0.000			0.583			0.500		0.750					
PM APP/DEPART	2	/	1	0	/	3	7	/	5	6	/	6	0					

I-15 NB Ramp

NORTH SIDE

Main WEST SIDE EAST SIDE **Main**

SOUTH SIDE

I-15 NB Ramp

APPENDIX D

TRIP GENERATION COMPARISON ANALYSIS

November 28, 2022

Mr. Ramin Namvar
RACHAMIN 5, LLC
6001 East Slauson Avenue
Commerce, California 90040

RE: Amargosa and Palmeto High-Cube Warehouse Trip Generation Comparison Analysis
Project No.: 19522

Dear Mr. Namvar:

Ganddini Group, Inc. is pleased to provide this Trip Generation Comparison Analysis for the proposed Amargosa and Palmeto High-Cube Warehouse Project. The purpose of this trip generation comparison analysis is to evaluate the change in trip generation that can be expected between the proposed project and an alternative land use consisting of commercial retail. This Trip Generation Comparison Analysis supplements the Amargosa and *Palmetto High-Cube Warehouse Traffic Impact Analysis* (Ganddini Group, Inc., August 18, 2022). We trust the findings of this analysis will aid you and the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The project site is currently undeveloped. Figure 1 illustrates the project location map.

The 30.52-acre project site is proposed to include a 499,850 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 499,700 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE *Trip Generation Manual* and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD).

As shown in Table 1, the proposed project is forecast to generate approximately 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

ALTERNATIVE LAND USE TRIP GENERATION

Table 2 shows the alternative land use (commercial retail) trip generation based on regression equations from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 820 (Shopping Center (>150k)) has been used to estimate the site-specific trip generation estimates for up to 499,850 square feet of commercial retail use.

It should be noted that commercial retail land uses will often locate next to busy roadways to attract motorists already on the street. Since the trip generation rates shown in Table 2 represent vehicles entering and exiting at the site driveway(s), it is appropriate to reduce the initial trip generation forecast by the applicable pass-by trip rate when calculating the net new trips that will be added to the surrounding street system. However, pass-by trip adjustments were not applied to the alternative land use trip generation in accordance with pass-by rates noted in the ITE *Trip Generation Manual* (11th Edition, 2021) since Amargosa Road adjacent to the project site is a low volume roadway and pass-by trips would be minimal.

As shown in Table 2, the alternative land use is forecast to generate a total of approximately 18,915 daily trips, including 429 trips during the AM peak hour and 1,798 trips during the PM peak hour without a pass-by trips reduction.

TRIP GENERATION COMPARISON

Table 3 shows the difference in project trip generation between the proposed project and the alternative land use. As shown in Table 3, the proposed project is forecast to generate approximately 17,832 fewer daily trips compared to a shopping center land use of equivalent size, including 339 fewer trips during the AM peak hour and 1,717 fewer trips during the PM peak hour.

PROJECT TRIP DISTRIBUTION

Figure 3 to Figure 6 show the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns were developed using engineering judgment in consultation with City of Hesperia staff and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

ALTERNATIVE LAND USE TRIP DISTRIBUTION

Figure 7 shows the forecast directional distribution patterns for the alternative land use generated trips. The alternative land use trip distribution patterns were developed using engineering judgment and are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

PROJECT TRIP ASSIGNMENT

Project AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 8 and Figure 9, respectively.

ALTERNATIVE LAND USE TRIP ASSIGNMENT

Alternative Land Use AM and PM peak hour intersection turning movement volumes expected from the alternative land use are depicted on Figure 10 and Figure 11, respectively.

Mr. Ramin Namvar
RACHAMIN 5, LLC
November 28, 2022

Difference in Trip Assignment

The additional AM and PM peak hour intersection turning movement volumes expected from the alternative land use versus the proposed project are depicted on Figure 12 and Figure 13, respectively.

As shown on these figures, the alternative land use as commercial retail is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed project for all turning movements at each study area intersection where peak hour trips are expected to be added.

Conclusion

Based on the trip generation comparison analysis, the proposed project consisting of a 499,850 square foot high-cube fulfillment center warehouse building is forecast to generate substantially fewer trips (up to 94% fewer daily trips) compared to an alternative land use composed of 499,850 square feet of commercial retail.

The alternative land use as commercial retail is expected to generate significantly more AM and PM peak hour intersection turning movement volumes compared to the proposed project for all turning movements at each study area intersection where peak hour trips are expected to be added.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
Bryan Crawford | Senior Associate
Giancarlo Ganddini, PE, PTP | Principal



Table 1
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.850 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet
(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
(3) PCE = Passenger Car Equivalent
(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 2
Alternative Land Use Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			
Land Use	Source[1]	Units[2]	% In	% Out	Equation	% In	% Out	Equation	Daily Equation
Shopping Center (>150k)	ITE 820	TSF	62%	38%	T=0.59(X) + 133.55	48%	52%	LN(T) = 0.72Ln(X) + 3.02	T = 26.11(X) + 5863.73

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units[3]	In	Out	Total	In	Out	Total	Daily
Shopping Center (>150k)	499.850	TSF	266	163	429	863	935	1,798	18,915

Notes:

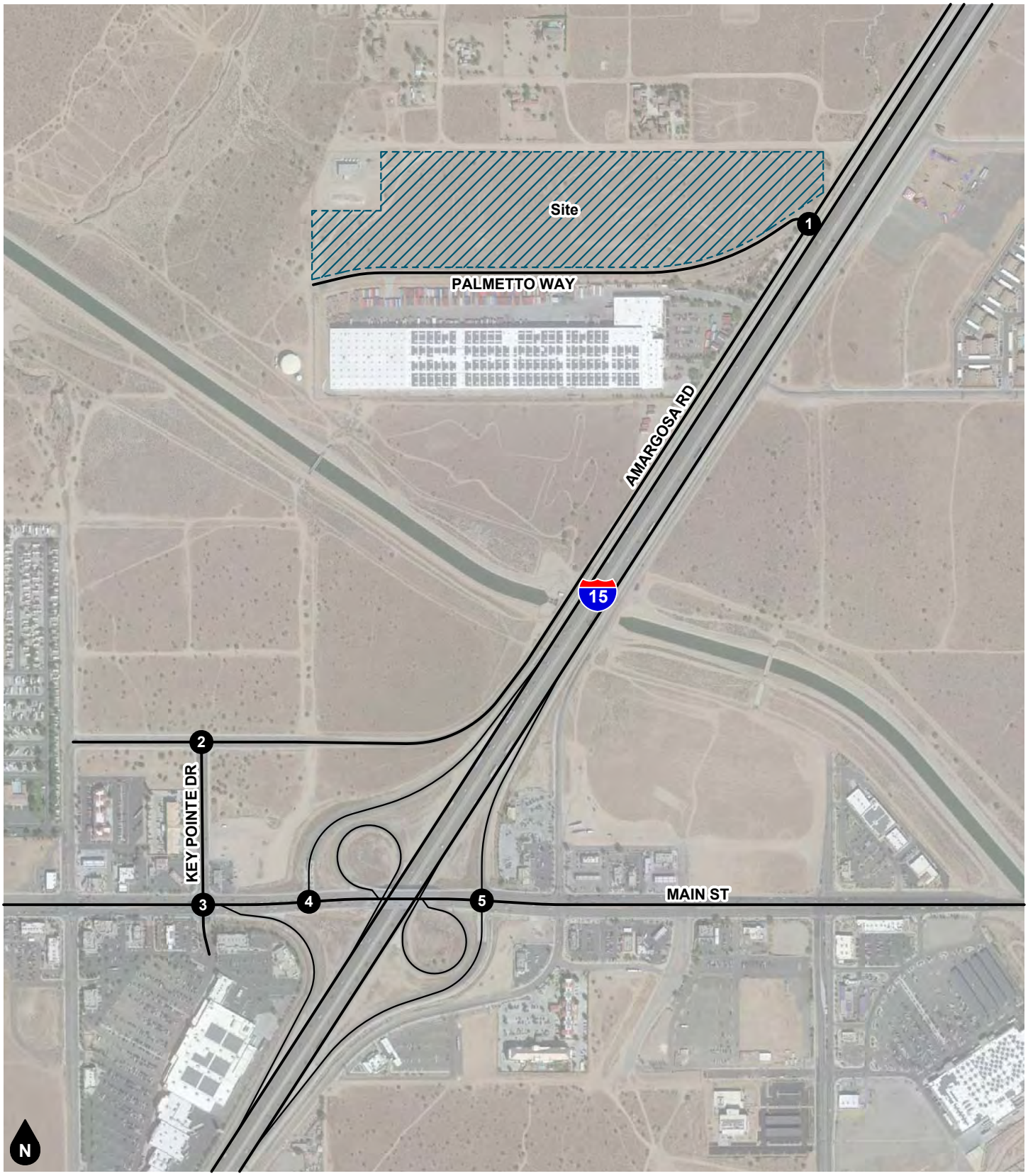
(1) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = Land Use Code.

(2) TSF = Thousand Square Feet

Table 3
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	Daily
Project[1]	65	25	90	32	49	81	1,083
Alternative Land Use[2]	266	163	429	863	935	1,798	18,915
Difference	**-201**	**-138**	**-339**	**-831**	**-886**	**-1,717**	**-17,832**
	-76%	**-85%**	**-79%**	**-96%**	**-95%**	**-95%**	**-94%**

Notes:
(1) See Table 1.
(2) See Table 2.



Legend

Study Intersection

Figure 1
Project Location Map

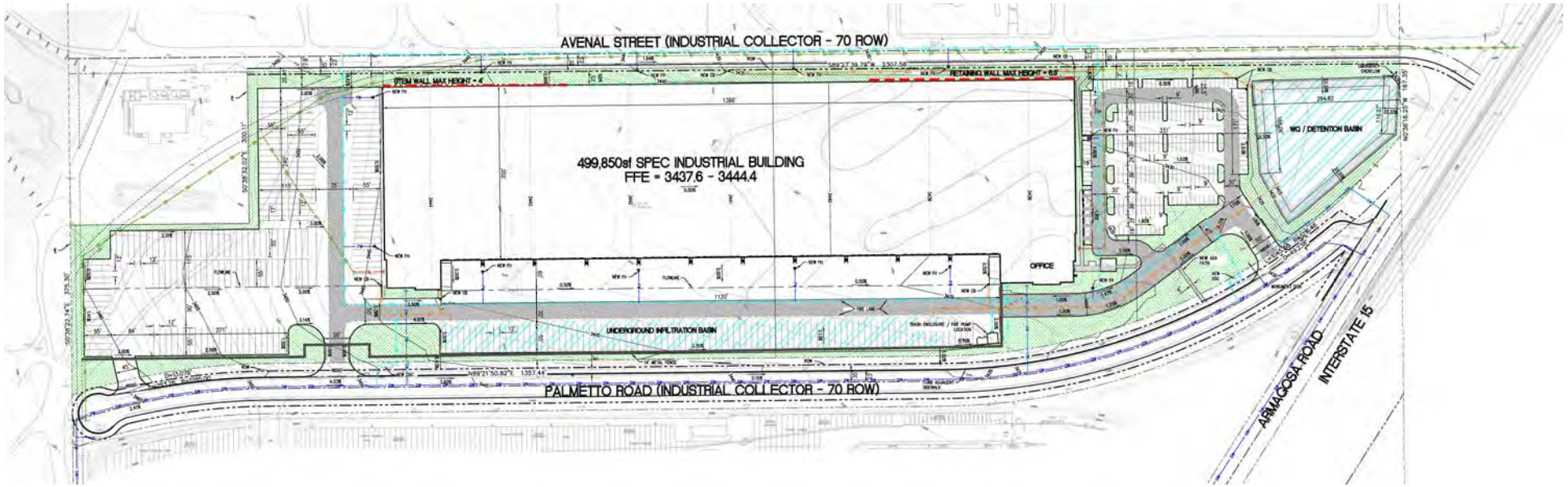


Figure 2
Site Plan

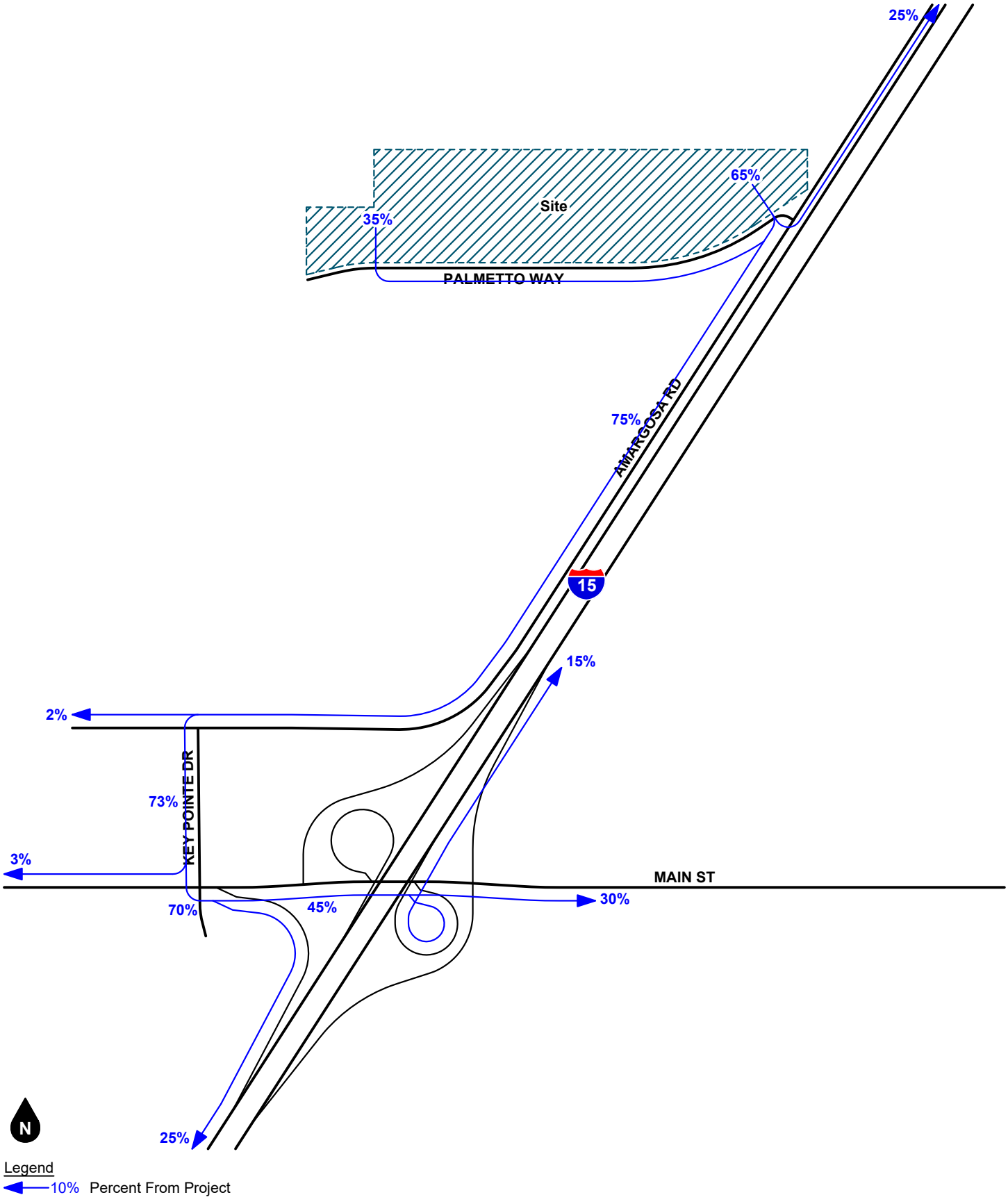


Figure 3
Project Outbound Trip Distribution - Cars

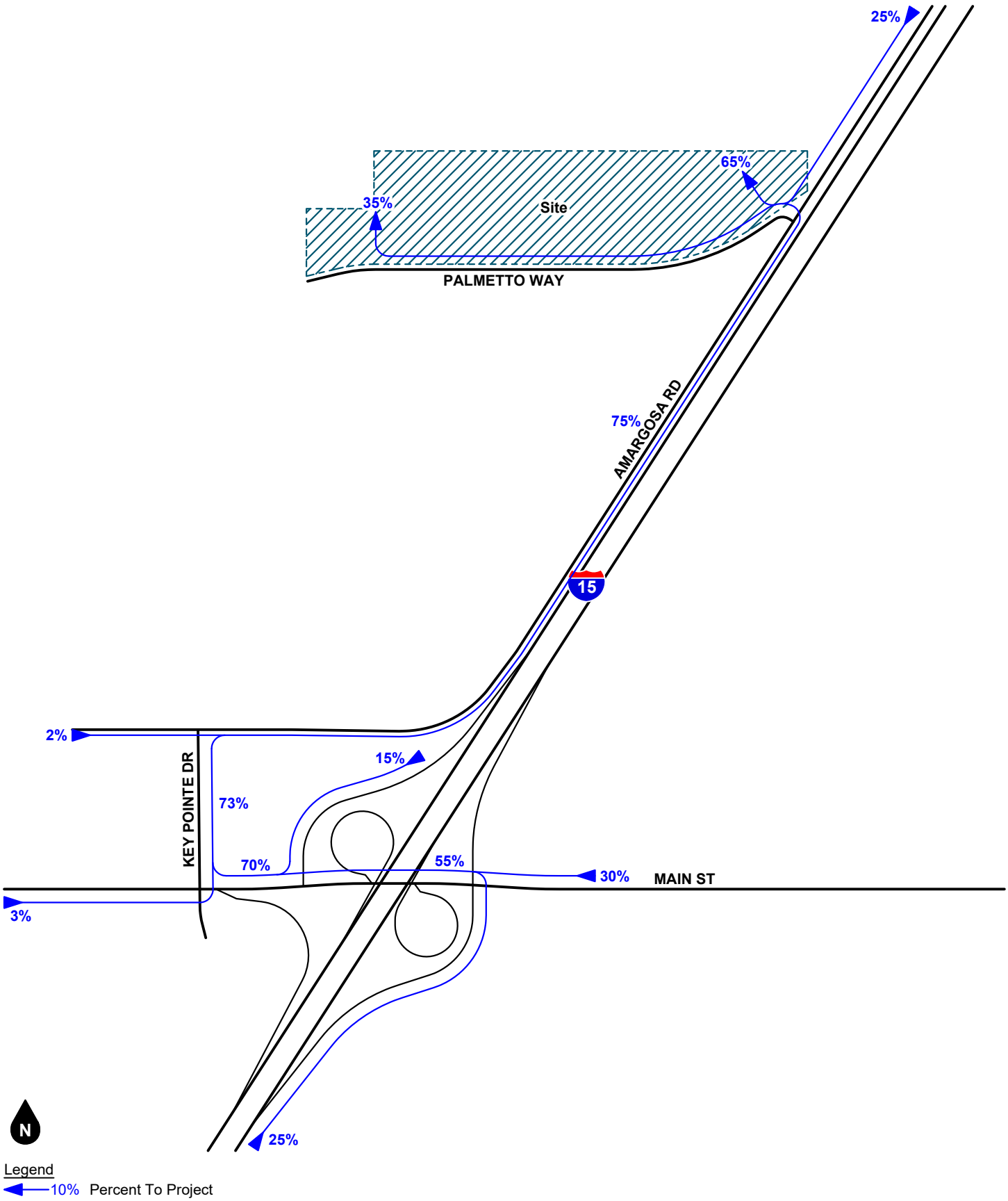


Figure 4
Project Inbound Trip Distribution - Cars

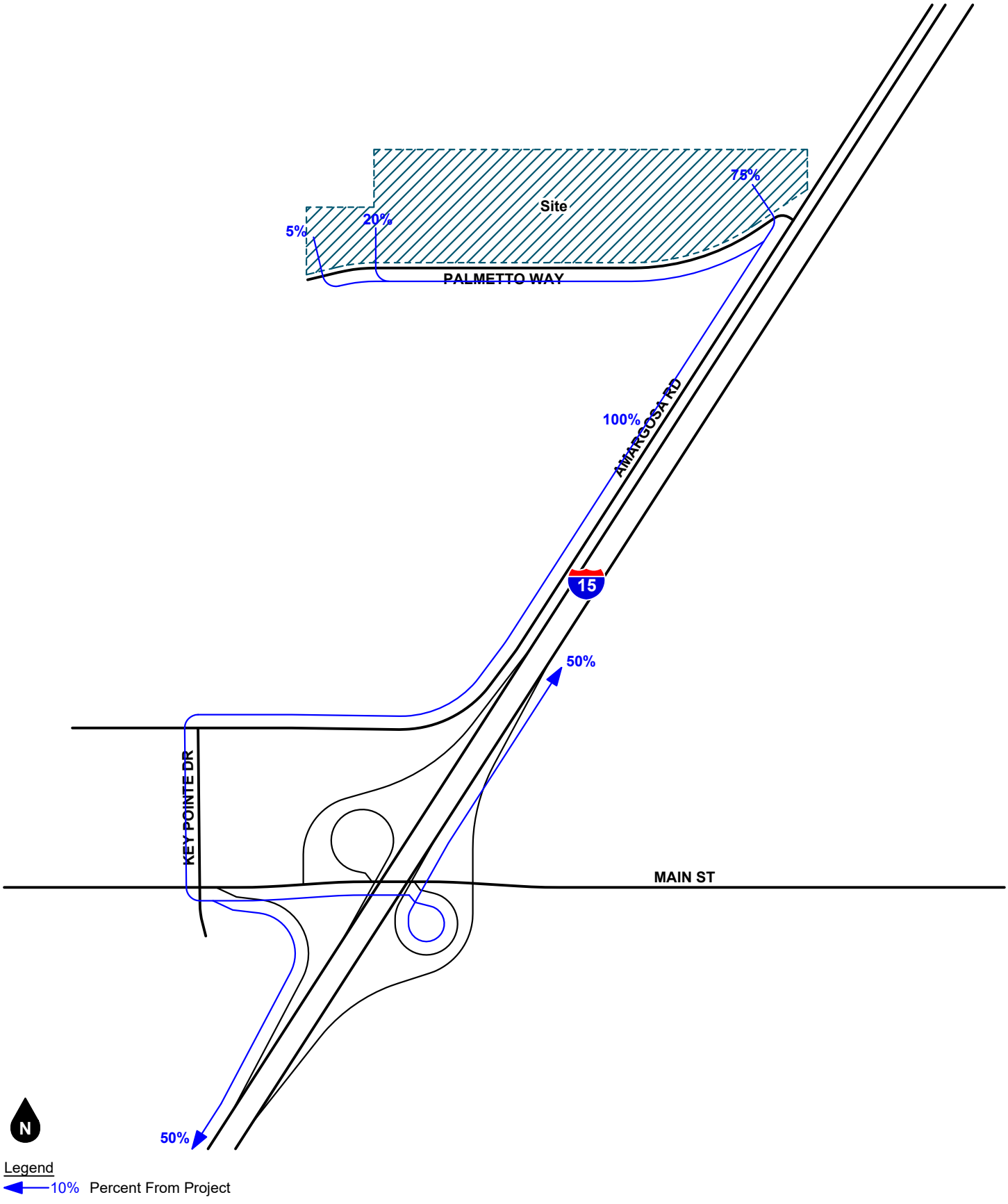


Figure 5
Project Outbound Trip Distribution - Trucks

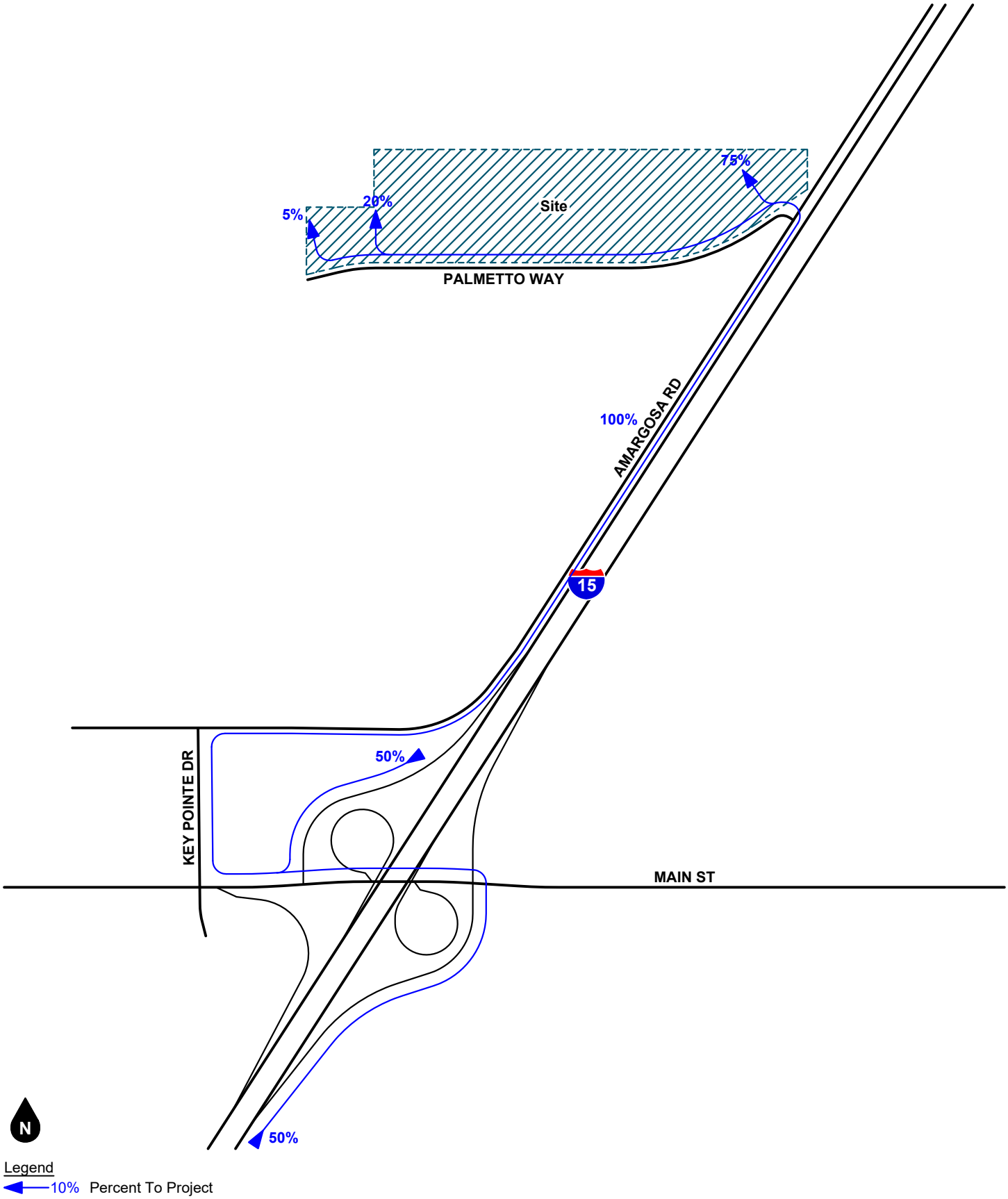


Figure 6
Project Inbound Trip Distribution - Trucks

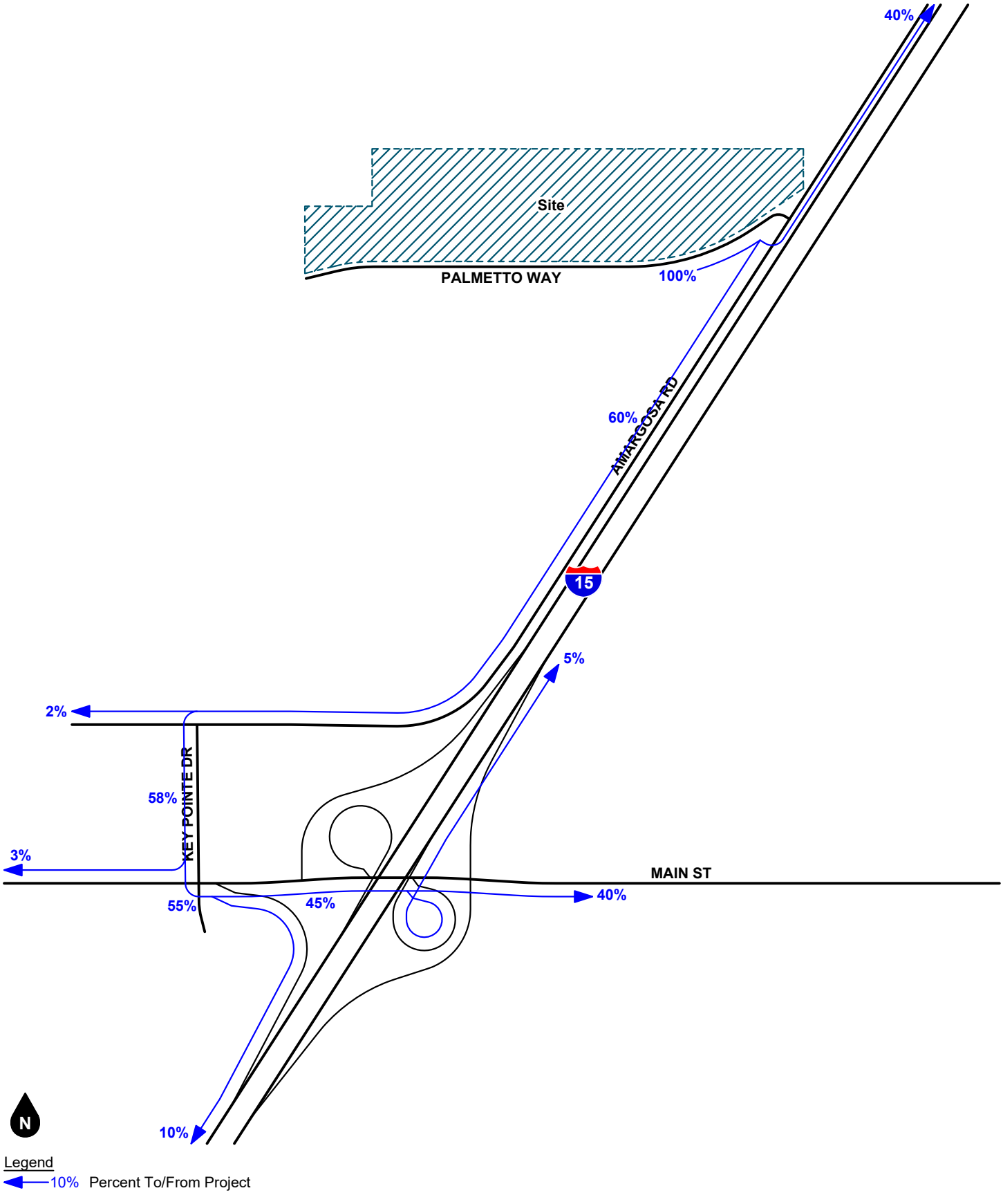


Figure 7
Alternative Land Use Trip Distribution

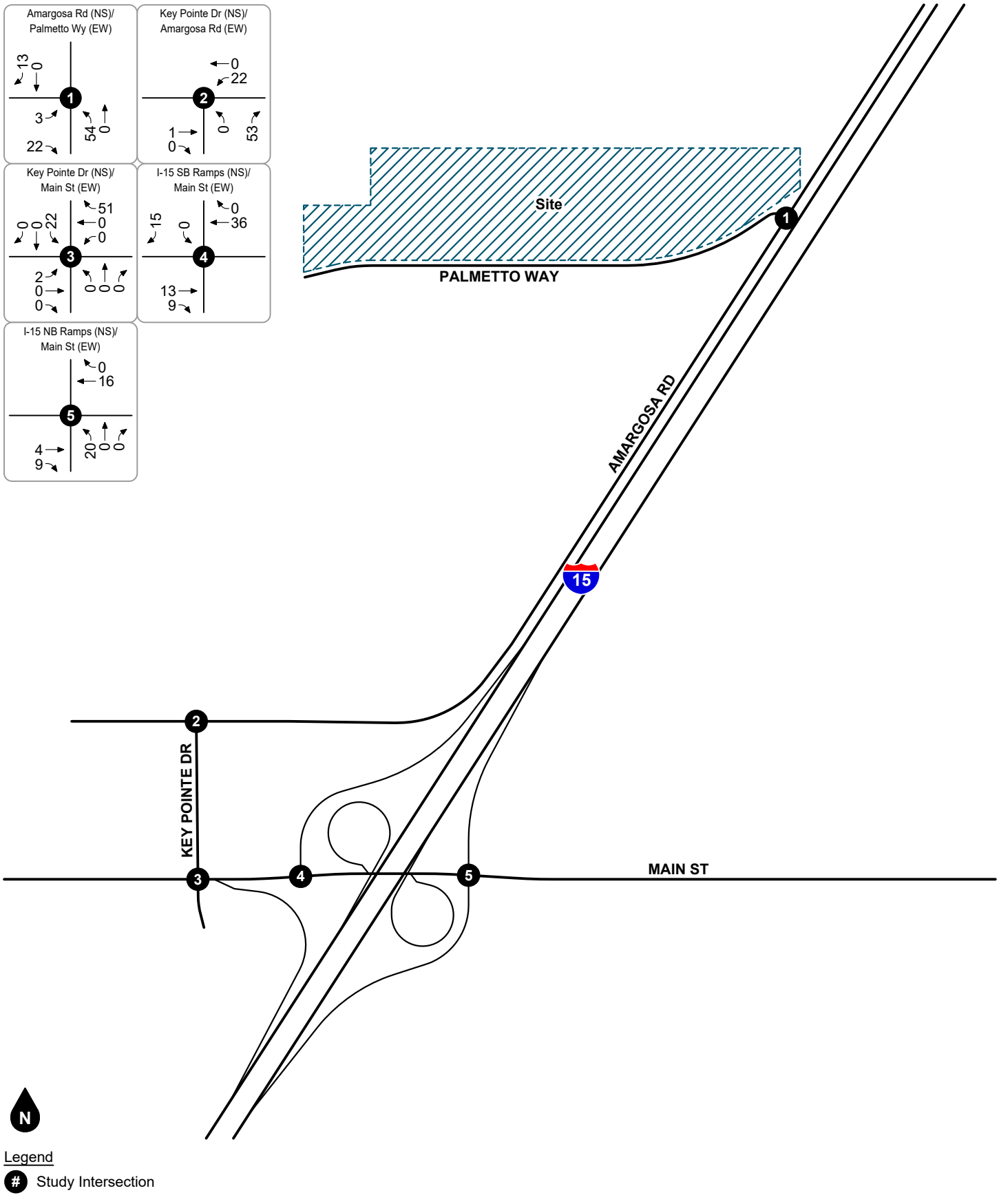


Figure 8
Project AM Peak Hour Intersection Turning Movement Volumes

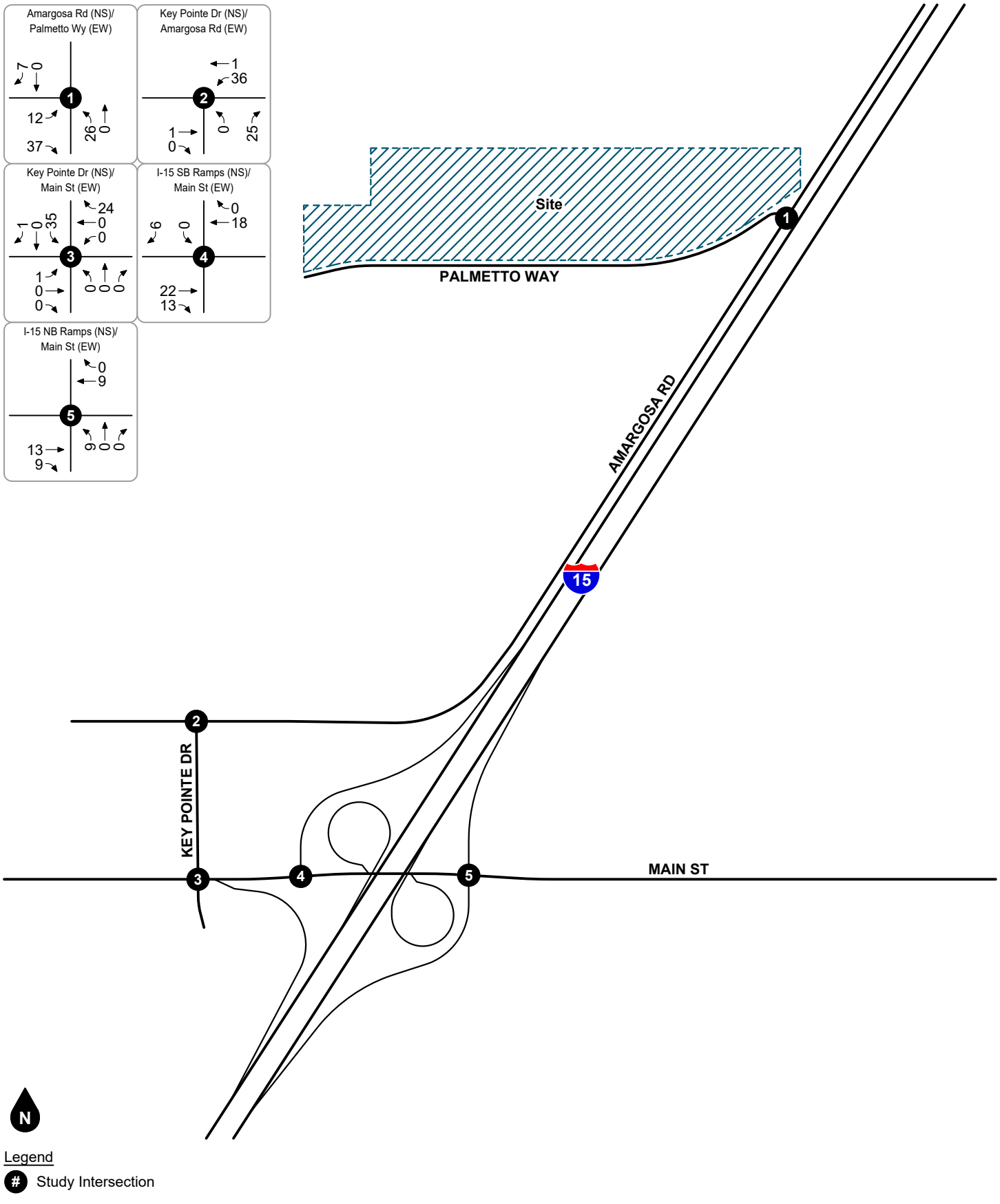
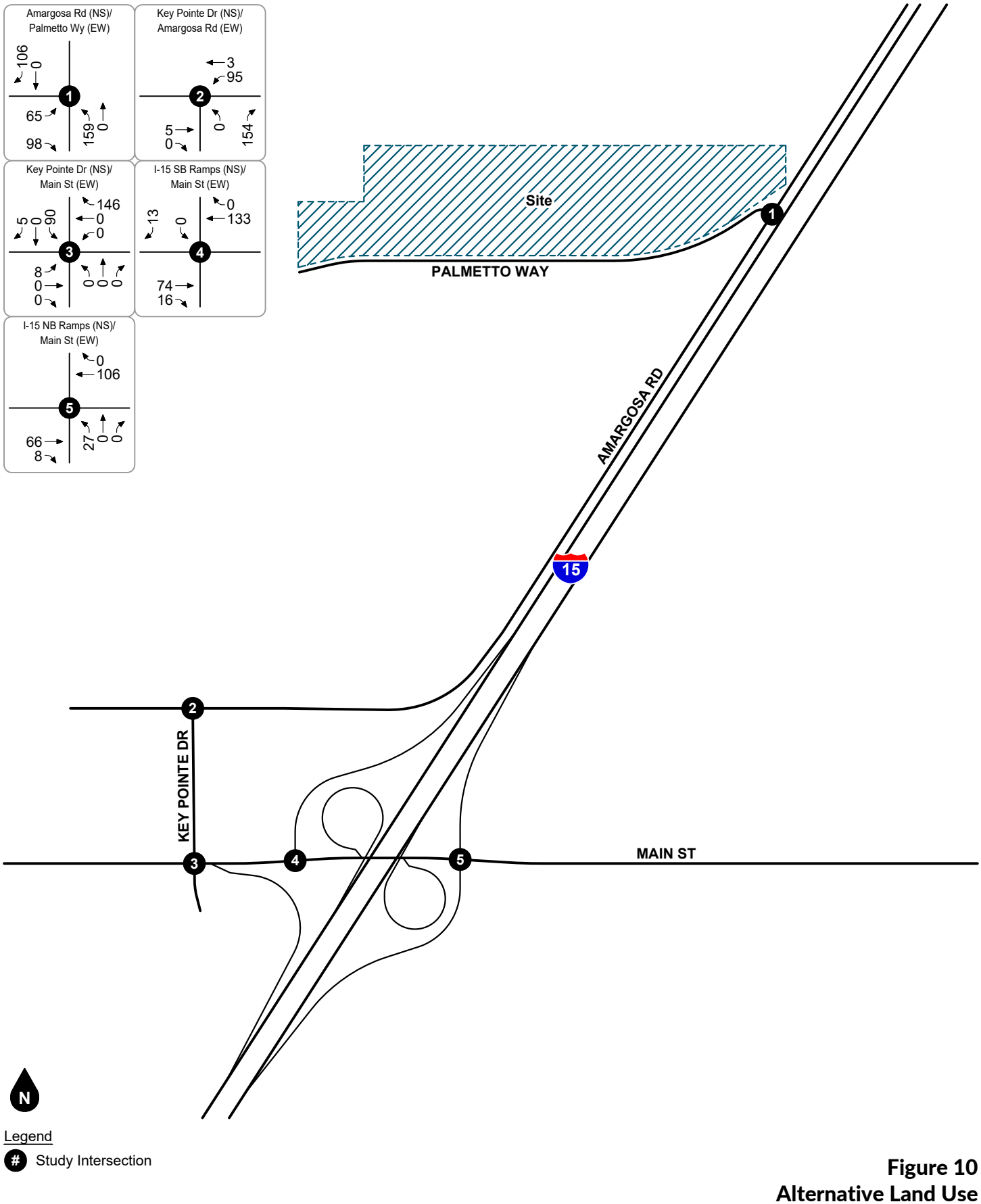


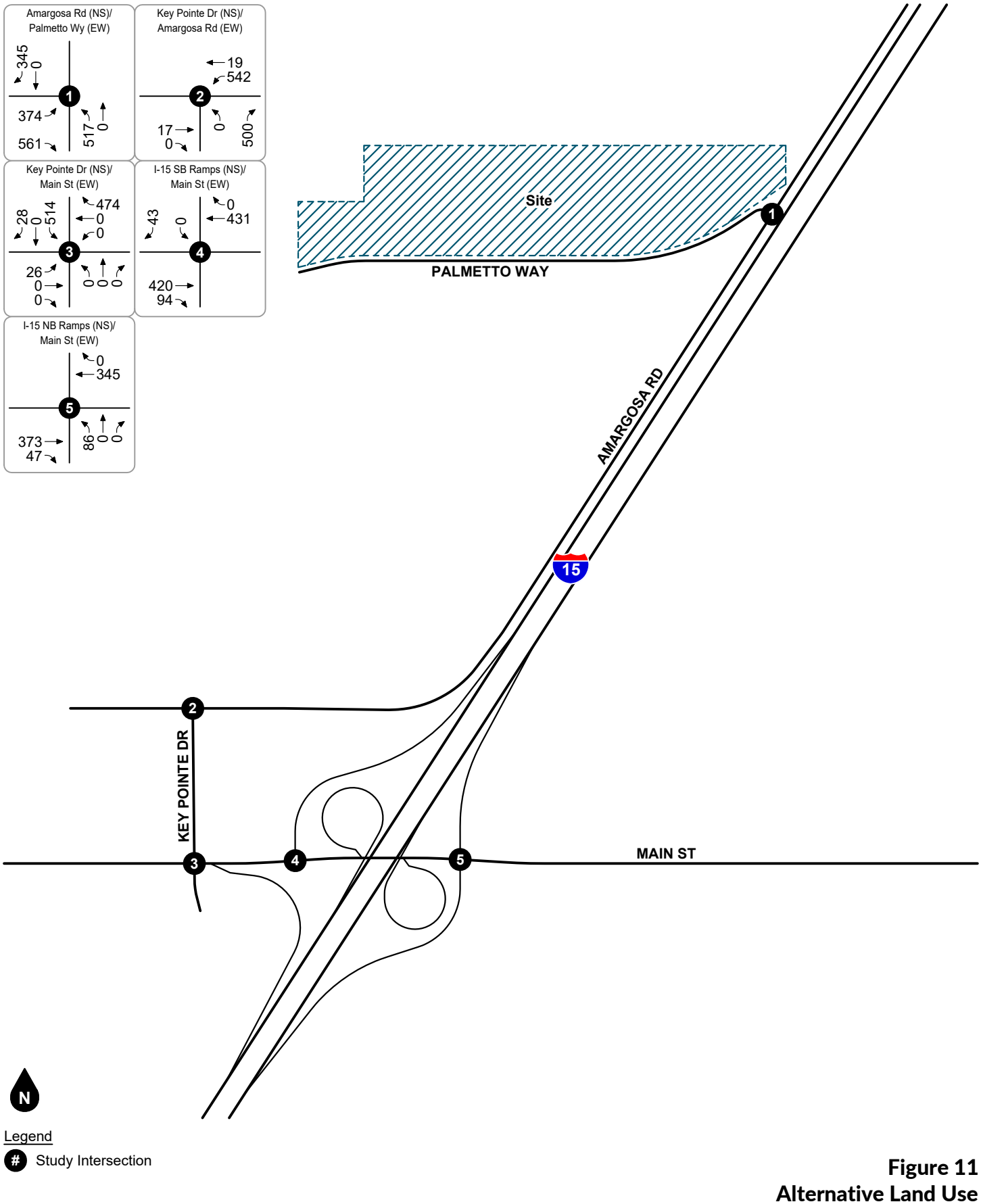
Figure 9
Project PM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

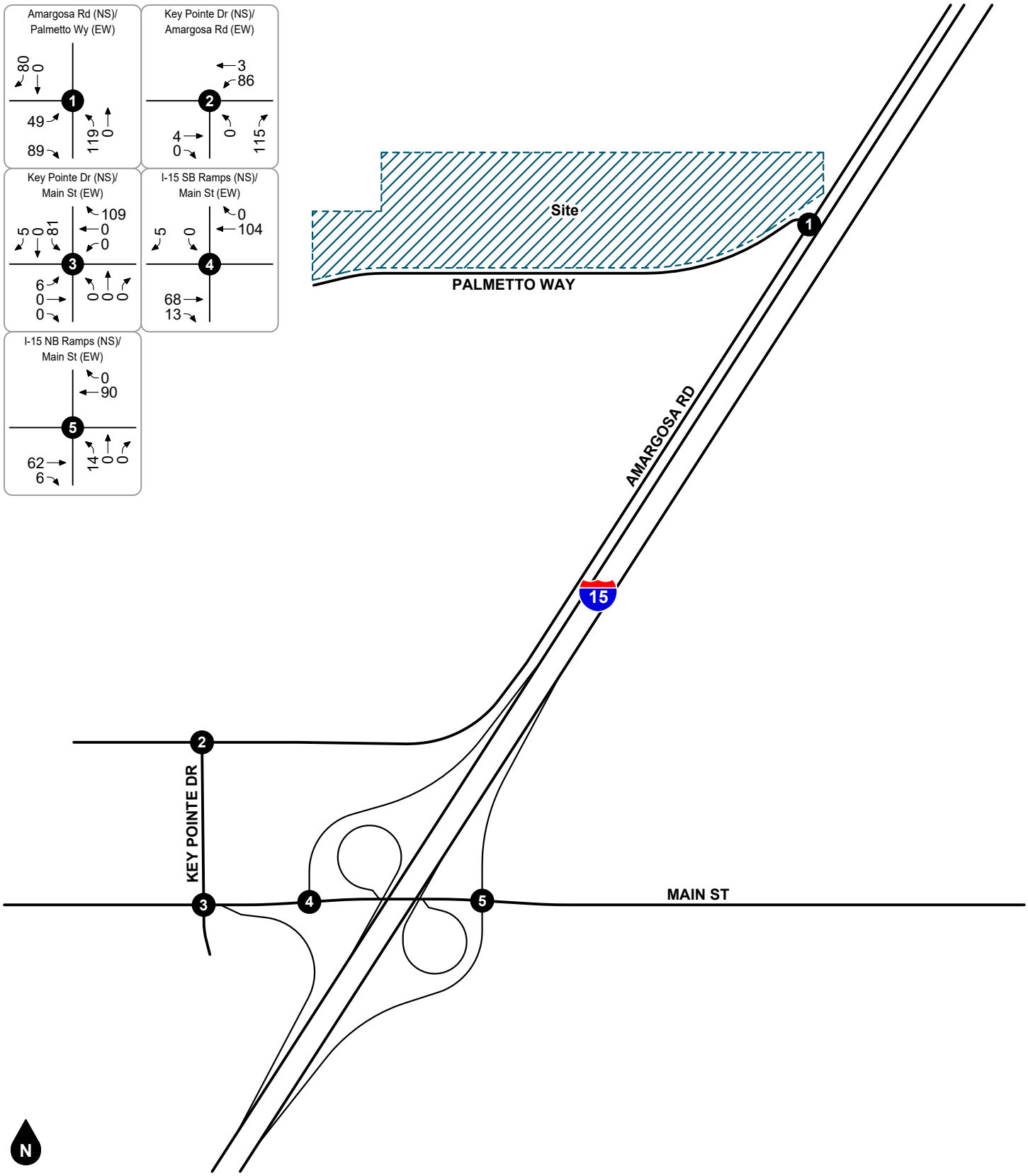
Figure 10
Alternative Land Use
AM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

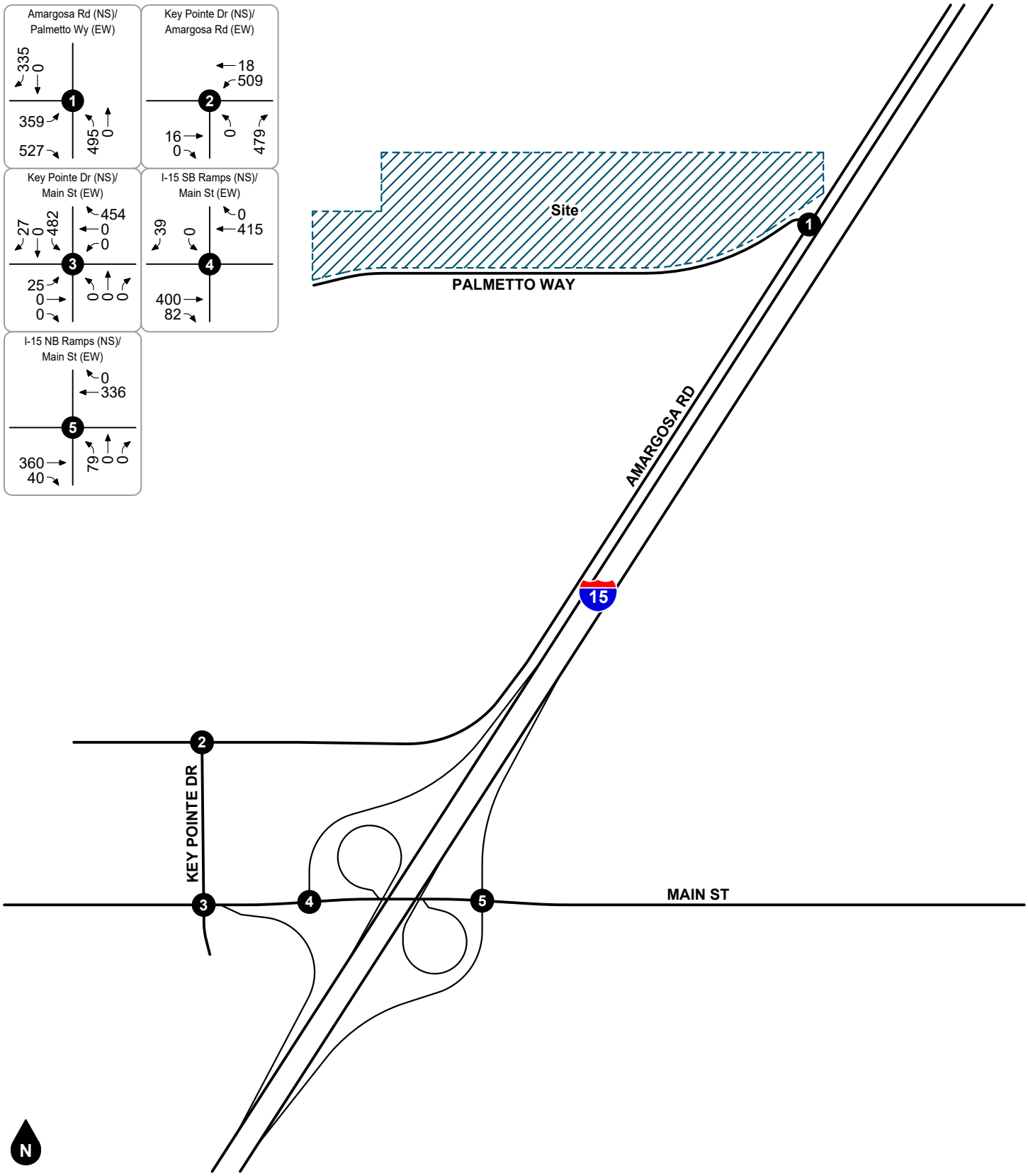
Figure 11
Alternative Land Use
PM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

Figure 12
Additional Alternative Land Use Generated Trips Versus Project Generated Trips
AM Peak Hour Intersection Turning Movement Volumes



Legend

Study Intersection

Figure 13
Additional Alternative Land Use Generated Trips Versus Project Generated Trips
PM Peak Hour Intersection Turning Movement Volumes

APPENDIX E

LEVEL OF SERVICE WORKSHEETS

EXISTING

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro
Report File: C:\...\AME.pdf

Scenario 1 Existing AM Peak Hour
8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.002	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.005	8.7	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.464	14.4	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.344	8.2	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.376	4.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	196	208	0	0	0
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	55	59	0	0	0
Total Analysis Volume [veh/h]	0	221	234	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.62	0.00	0.00	0.00	10.94	9.30
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		10.12	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	163	1	7	140
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	48	0	2	41
Total Analysis Volume [veh/h]	0	6	190	1	8	164
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	9.99	8.74	0.00	0.00	7.53	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.00	0.39	0.00	0.00	0.29	0.15
d_A, Approach Delay [s/veh]	8.74		0.00		0.36	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.464

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	26	37	7	3	8	250	2	52	164	36
Total Analysis Volume [veh/h]	4	13	105	148	28	12	32	999	9	208	655	142
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12	12	12	4	36	36	10	42	42
g / C, Green / Cycle	0.17	0.17	0.17	0.17	0.17	0.06	0.52	0.52	0.14	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.06	0.11	0.02	0.02	0.20	0.01	0.12	0.15	0.15
s, saturation flow rate [veh/h]	1393	1800	1530	1305	1710	1619	4631	1445	1619	3427	1641
c, Capacity [veh/h]	265	298	254	272	283	103	2414	753	229	2055	984
d1, Uniform Delay [s]	27.40	24.53	26.02	29.64	24.90	31.29	10.03	8.07	29.29	6.57	6.58
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.05	0.95	1.45	0.21	1.56	0.46	0.03	8.77	0.28	0.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.04	0.38	0.50	0.13	0.29	0.38	0.01	0.84	0.24	0.25
d, Delay for Lane Group [s/veh]	27.42	24.58	26.96	31.10	25.11	32.86	10.49	8.09	38.06	6.85	7.18
Lane Group LOS	C	C	C	C	C	C	B	A	D	A	A
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.17	1.45	2.26	0.52	0.49	2.23	0.05	3.39	1.24	1.29
50th-Percentile Queue Length [ft/ln]	1.47	4.14	36.20	56.47	13.01	12.14	55.84	1.24	84.64	31.11	32.33
95th-Percentile Queue Length [veh/ln]	0.11	0.30	2.61	4.07	0.94	0.87	4.02	0.09	6.09	2.24	2.33
95th-Percentile Queue Length [ft/ln]	2.65	7.45	65.16	101.65	23.42	21.85	100.50	2.24	152.36	56.00	58.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.42	24.58	26.96	31.10	25.11	25.11	32.86	10.49	8.09	38.06	6.91	7.18
Movement LOS	C	C	C	C	C	C	C	B	A	D	A	A
d_A, Approach Delay [s/veh]	26.73			29.82			11.17			13.40		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.41											
Intersection LOS	B											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.58	26.58	26.58	26.58
l_p,int, Pedestrian LOS Score for Intersection	2.203	2.042	3.042	3.263
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	828	828	543	543
d_b, Bicycle Delay [s]	12.01	12.01	18.58	18.58
l_b,int, Bicycle LOS Score for Intersection	1.746	1.847	2.090	2.072
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.344

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	308	0	177	0	1009	0	0	756	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	82	0	47	0	267	0	0	200	0
Total Analysis Volume [veh/h]	0	0	0	326	0	188	0	1069	0	0	801	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		10	10	42	42	42	42
g / C, Green / Cycle		0.17	0.17	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate		0.10	0.12	0.21	0.00	0.15	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		499	258	3425	1069	3425	1069
d1, Uniform Delay [s]		23.22	23.53	3.45	0.00	3.24	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		1.25	3.27	0.22	0.00	0.15	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.62	0.69	0.29	0.00	0.22	0.00
d, Delay for Lane Group [s/veh]		24.47	26.80	3.67	0.00	3.38	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		1.98	2.44	0.59	0.00	0.68	0.00
50th-Percentile Queue Length [ft/ln]		49.49	60.97	14.74	0.00	17.10	0.00
95th-Percentile Queue Length [veh/ln]		3.56	4.39	1.06	0.00	1.23	0.00
95th-Percentile Queue Length [ft/ln]		89.09	109.74	26.54	0.00	30.77	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	24.47	0.00	26.80	0.00	3.67	0.00	0.00	3.38	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			25.32			3.67			3.38		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	8.24											
Intersection LOS	A											
Intersection V/C	0.344											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.230	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.115	1.975
Bicycle LOS	D	A	B	A

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	4.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.376

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	3	41	0	0	0	0	1016	0	0	1103	461
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	1	11	0	0	0	0	265	0	0	287	120
Total Analysis Volume [veh/h]	85	3	43	0	0	0	0	1058	0	0	1149	480
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	16	0	0	0	0	0	69	0	0	69	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	85	85	85		85	85	85	85
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		68	68	68	68
g / C, Green / Cycle	0.11	0.11	0.11		0.79	0.79	0.79	0.79
(v / s)_i Volume / Saturation Flow Rate	0.05	0.01	0.01		0.21	0.00	0.22	0.30
s, saturation flow rate [veh/h]	1714	1562	1530		4903	1530	4903	1530
c, Capacity [veh/h]	194	177	173		3888	1213	3888	1213
d1, Uniform Delay [s]	35.19	33.98	33.99		2.30	0.00	2.35	2.61
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.47	0.32	0.33		0.16	0.00	0.18	0.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.13	0.13		0.26	0.00	0.28	0.38
d, Delay for Lane Group [s/veh]	36.66	34.30	34.32		2.47	0.00	2.54	3.52
Lane Group LOS	D	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.64	0.42	0.42		0.52	0.00	0.58	1.02
50th-Percentile Queue Length [ft/ln]	40.94	10.53	10.44		13.06	0.00	14.52	25.56
95th-Percentile Queue Length [veh/ln]	2.95	0.76	0.75		0.94	0.00	1.05	1.84
95th-Percentile Queue Length [ft/ln]	73.69	18.96	18.79		23.52	0.00	26.14	46.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	36.66	34.30	34.31	0.00	0.00	0.00	0.00	2.47	0.00	0.00	2.54	3.52
Movement LOS	D	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	35.84			0.00			2.47			2.83		
Approach LOS	D			A			A			A		
d_I, Intersection Delay [s/veh]	4.23											
Intersection LOS	A											
Intersection V/C	0.376											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.02	34.02	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.161	1.875	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	282	0	1528	1528
d_b, Bicycle Delay [s]	31.39	42.54	2.37	2.37
l_b,int, Bicycle LOS Score for Intersection	1.768	4.132	2.118	2.420
Bicycle LOS	A	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro
Report File: C:\...\PME.pdf

Scenario 1 Existing PM Peak Hour
8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.1	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.006	12.1	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.659	22.2	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.524	10.8	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.628	12.1	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	443	417	0	0	0
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	121	114	0	0	0
Total Analysis Volume [veh/h]	1	484	456	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.12	0.00	0.00	0.00	15.98	10.62
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.02		0.00		13.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	19	287	9	12	335
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	5	77	2	3	89
Total Analysis Volume [veh/h]	3	20	307	10	13	358
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.02	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	12.07	9.19	0.00	0.00	7.83	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.07	0.00	0.00	0.02	0.01
95th-Percentile Queue Length [ft/ln]	0.44	1.66	0.00	0.00	0.50	0.25
d_A, Approach Delay [s/veh]	9.58		0.00		0.27	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.659

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	62	61	22	4	12	249	5	76	286	50
Total Analysis Volume [veh/h]	32	59	248	243	86	15	47	998	19	303	1143	200
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	19	28	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	22	22	22	22	22	6	26	26	15	35	35
g / C, Green / Cycle	0.30	0.30	0.30	0.30	0.30	0.08	0.34	0.34	0.20	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.21	0.06	0.03	0.21	0.01	0.18	0.26	0.26
s, saturation flow rate [veh/h]	1317	1800	1530	1098	1753	1619	4631	1445	1619	3427	1666
c, Capacity [veh/h]	390	532	453	363	519	134	1594	497	324	1582	769
d1, Uniform Delay [s]	23.16	19.21	22.09	27.39	19.72	32.50	20.41	16.34	29.36	14.62	14.62
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.09	0.98	1.99	0.18	1.52	1.75	0.14	11.43	1.42	2.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.11	0.53	0.65	0.19	0.34	0.61	0.04	0.91	0.55	0.56
d, Delay for Lane Group [s/veh]	23.24	19.30	23.06	29.37	19.90	34.02	22.16	16.48	40.78	16.03	17.53
Lane Group LOS	C	B	C	C	B	C	C	B	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.43	0.71	3.50	4.08	1.26	0.78	4.29	0.20	5.67	4.69	4.88
50th-Percentile Queue Length [ft/ln]	10.79	17.69	87.45	101.94	31.59	19.56	107.34	4.96	141.83	117.15	122.01
95th-Percentile Queue Length [veh/ln]	0.78	1.27	6.30	7.34	2.27	1.41	7.69	0.36	9.58	8.24	8.50
95th-Percentile Queue Length [ft/ln]	19.42	31.84	157.41	183.49	56.85	35.20	192.29	8.94	239.49	205.91	212.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.24	19.30	23.06	29.37	19.90	19.90	34.02	22.16	16.48	40.78	16.35	17.53
Movement LOS	C	B	C	C	B	B	C	C	B	D	B	B
d_A, Approach Delay [s/veh]	22.43			26.57			22.59			21.00		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.21											
Intersection LOS	C											
Intersection V/C	0.659											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.05	29.05	29.05	29.05
l_p,int, Pedestrian LOS Score for Intersection	2.300	2.138	3.207	3.629
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	773	773	507	640
d_b, Bicycle Delay [s]	14.12	14.12	20.92	17.35
l_b,int, Bicycle LOS Score for Intersection	2.102	2.112	2.128	2.440
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.524

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	443	0	351	0	1272	0	0	1253	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	113	0	90	0	324	0	0	320	0
Total Analysis Volume [veh/h]	0	0	0	452	0	358	0	1298	0	0	1279	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		17	17	35	35	35	35
g / C, Green / Cycle		0.29	0.29	0.58	0.58	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate		0.15	0.23	0.26	0.00	0.26	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		849	439	2845	888	2845	888
d1, Uniform Delay [s]		18.01	19.87	7.16	0.00	7.12	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.50	3.51	0.51	0.00	0.50	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.52	0.80	0.45	0.00	0.44	0.00
d, Delay for Lane Group [s/veh]		18.51	23.38	7.67	0.00	7.62	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.41	4.55	1.97	0.00	2.44	0.00
50th-Percentile Queue Length [ft/ln]		60.36	113.65	49.15	0.00	60.88	0.00
95th-Percentile Queue Length [veh/ln]		4.35	8.04	3.54	0.00	4.38	0.00
95th-Percentile Queue Length [ft/ln]		108.64	201.07	88.46	0.00	109.59	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.51	0.00	23.38	0.00	7.67	0.00	0.00	7.62	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			20.66			7.67			7.62		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.76											
Intersection LOS	B											
Intersection V/C	0.524											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.305	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.259	2.249
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.628

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	190	4	772	0	0	0	0	1448	0	0	1529	404
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	1	198	0	0	0	0	372	0	0	393	104
Total Analysis Volume [veh/h]	195	4	793	0	0	0	0	1488	0	0	1571	415
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19		33	33	33	33
g / C, Green / Cycle	0.31	0.31	0.31		0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.11	0.25	0.25		0.30	0.00	0.31	0.26
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	538	481	480		2712	846	2712	846
d1, Uniform Delay [s]	15.94	18.97	18.98		8.53	0.00	8.73	8.17
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.39	3.34	3.37		0.76	0.00	0.86	1.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.81	0.81		0.53	0.00	0.56	0.48
d, Delay for Lane Group [s/veh]	16.33	22.31	22.35		9.29	0.00	9.59	10.10
Lane Group LOS	B	C	C		A	A	A	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.89	4.91	4.91		2.69	0.00	2.92	2.46
50th-Percentile Queue Length [ft/ln]	47.36	122.72	122.86		67.29	0.00	72.98	61.50
95th-Percentile Queue Length [veh/ln]	3.41	8.54	8.55		4.84	0.00	5.25	4.43
95th-Percentile Queue Length [ft/ln]	85.24	213.56	213.75		121.12	0.00	131.37	110.70

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.33	22.31	22.33	0.00	0.00	0.00	0.00	9.29	0.00	0.00	9.59	10.10
Movement LOS	B	C	C					A	A		A	B
d_A, Approach Delay [s/veh]	21.15			0.00			9.29			9.70		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	12.11											
Intersection LOS	B											
Intersection V/C	0.628											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.347	1.802	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.154	4.132	2.356	2.623
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2024) WITHOUT PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro
Scenario 2 Opening Year (2024) Without Project AM Peak Hour

Report File: C:\...\AMOYWO.pdf
8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.002	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.055	9.0	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.526	14.8	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.479	9.9	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.470	5.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.002

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	3	12	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	207	228	0	0	0
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	58	64	0	0	0
Total Analysis Volume [veh/h]	0	233	257	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	0.00	11.18	9.41
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		10.30	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.055

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	48	1	0	21	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	53	171	1	28	146
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	50	0	8	43
Total Analysis Volume [veh/h]	0	62	200	1	33	171
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.06	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	10.47	8.96	0.00	0.00	7.57	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.17	0.00	0.00	0.05	0.02
95th-Percentile Queue Length [ft/ln]	0.00	4.37	0.00	0.00	1.19	0.59
d_A, Approach Delay [s/veh]	8.96		0.00		1.22	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.526

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	21	0	0	1	106	0	0	435	47
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	101	164	27	11	32	1069	8	201	1067	184
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	27	44	7	3	9	288	2	54	288	50
Total Analysis Volume [veh/h]	4	13	109	177	29	12	35	1153	9	217	1151	198
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	13	13	13	13	5	35	35	10	40	40
g / C, Green / Cycle	0.19	0.19	0.19	0.19	0.19	0.07	0.50	0.50	0.14	0.57	0.57
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.13	0.02	0.02	0.23	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1391	1800	1530	1300	1713	1619	4631	1445	1619	3427	1668
c, Capacity [veh/h]	294	338	287	299	322	108	2305	719	231	1968	958
d1, Uniform Delay [s]	26.11	23.26	24.73	28.90	23.62	31.12	11.48	8.88	29.37	8.42	8.42
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.04	0.73	1.58	0.16	1.52	0.67	0.03	10.60	0.68	1.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.04	0.35	0.55	0.12	0.30	0.46	0.01	0.87	0.43	0.43
d, Delay for Lane Group [s/veh]	26.13	23.30	25.47	30.48	23.79	32.64	12.16	8.91	39.97	9.10	9.82
Lane Group LOS	C	C	C	C	C	C	B	A	D	A	A
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.16	1.45	2.69	0.52	0.51	2.92	0.05	3.64	2.70	2.82
50th-Percentile Queue Length [ft/ln]	1.43	3.99	36.30	67.13	12.88	12.86	73.07	1.35	90.92	67.56	70.53
95th-Percentile Queue Length [veh/ln]	0.10	0.29	2.61	4.83	0.93	0.93	5.26	0.10	6.55	4.86	5.08
95th-Percentile Queue Length [ft/ln]	2.57	7.18	65.35	120.83	23.19	23.15	131.53	2.42	163.66	121.60	126.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.13	23.30	25.47	30.48	23.79	23.79	32.64	12.16	8.91	39.97	9.25	9.82
Movement LOS	C	C	C	C	C	C	C	B	A	D	A	A
d_A, Approach Delay [s/veh]	25.27			29.22			12.72			13.58		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.82											
Intersection LOS	B											
Intersection V/C	0.526											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.59	26.59	26.59	26.59
l_p,int, Pedestrian LOS Score for Intersection	2.206	2.069	3.165	3.463
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	828	828	543	543
d_b, Bicycle Delay [s]	12.02	12.02	18.59	18.59
l_b,int, Bicycle LOS Score for Intersection	1.753	1.893	2.170	2.358
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.479

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	142	0	96	31	0	340	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	320	0	326	0	1146	31	0	1127	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	0	86	0	303	8	0	298	0
Total Analysis Volume [veh/h]	0	0	0	339	0	345	0	1214	33	0	1194	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		16	16	36	36	36	36
g / C, Green / Cycle		0.26	0.26	0.60	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate		0.11	0.21	0.23	0.02	0.23	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		786	406	2949	920	2949	920
d1, Uniform Delay [s]		18.20	20.63	6.24	4.88	6.21	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.34	3.84	0.39	0.07	0.38	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.41	0.80	0.39	0.03	0.38	0.00
d, Delay for Lane Group [s/veh]		18.54	24.48	6.62	4.95	6.58	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		1.72	4.33	1.52	0.11	1.93	0.00
50th-Percentile Queue Length [ft/ln]		43.07	108.16	38.08	2.68	48.33	0.00
95th-Percentile Queue Length [veh/ln]		3.10	7.74	2.74	0.19	3.48	0.00
95th-Percentile Queue Length [ft/ln]		77.53	193.44	68.55	4.83	87.00	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.54	0.00	24.48	0.00	6.62	4.95	0.00	6.58	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			21.54			6.58			6.58		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.86											
Intersection LOS	A											
Intersection V/C	0.479											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.269	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.207	2.179
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	5.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.470

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	108	0	0	0	0	0	0	56	40	0	232	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	193	3	43	0	0	0	0	1113	40	0	1380	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	1	11	0	0	0	0	290	10	0	359	125
Total Analysis Volume [veh/h]	201	3	45	0	0	0	0	1159	42	0	1438	500
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	42	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	65	65	65		65	65	65	65
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		47	47	47	47
g / C, Green / Cycle	0.15	0.15	0.15		0.72	0.72	0.72	0.72
(v / s)_i Volume / Saturation Flow Rate	0.11	0.01	0.01		0.23	0.03	0.28	0.31
s, saturation flow rate [veh/h]	1714	1560	1530		4903	1530	4903	1530
c, Capacity [veh/h]	263	240	235		3548	1107	3548	1107
d1, Uniform Delay [s]	26.32	23.70	23.71		3.22	2.56	3.46	3.63
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.02	0.17	0.18		0.23	0.06	0.32	1.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.10	0.10		0.31	0.04	0.39	0.43
d, Delay for Lane Group [s/veh]	30.33	23.88	23.88		3.45	2.62	3.79	4.87
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.00	0.30	0.30		0.65	0.07	0.87	1.22
50th-Percentile Queue Length [ft/ln]	74.97	7.60	7.50		16.20	1.69	21.71	30.38
95th-Percentile Queue Length [veh/ln]	5.40	0.55	0.54		1.17	0.12	1.56	2.19
95th-Percentile Queue Length [ft/ln]	134.95	13.69	13.49		29.15	3.04	39.09	54.69

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.33	23.88	23.88	0.00	0.00	0.00	0.00	3.45	2.62	0.00	3.79	4.87
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	29.09			0.00			3.42			4.07		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	5.68											
Intersection LOS	A											
Intersection V/C	0.470											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.17	24.17	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.184	1.879	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	0	584	584
d_b, Bicycle Delay [s]	5.64	32.55	16.32	16.32
l_b,int, Bicycle LOS Score for Intersection	1.954	4.132	2.194	2.583
Bicycle LOS	A	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 2 Opening Year (2024) Without Project PM Peak Hour

Report File: C:\...\PMOYWO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.2	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.007	13.2	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.795	28.8	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.677	13.0	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.685	13.0	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	10	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	471	441	0	0	0
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	129	120	0	0	0
Total Analysis Volume [veh/h]	1	515	482	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.19	0.00	0.00	0.00	16.79	10.80
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.02		0.00		13.80	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.007

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	24	1	0	32	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	44	300	9	44	350
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	12	80	2	12	93
Total Analysis Volume [veh/h]	3	47	321	10	47	374
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	13.23	9.36	0.00	0.00	7.90	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.16	0.00	0.00	0.08	0.04
95th-Percentile Queue Length [ft/ln]	0.51	3.99	0.00	0.00	1.88	0.94
d_A, Approach Delay [s/veh]	9.60		0.00		0.88	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.795

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	31	0	1	1	402	0	0	267	23
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	59	251	277	87	17	49	1411	19	307	1423	225
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	65	71	22	4	13	363	5	79	366	58
Total Analysis Volume [veh/h]	33	61	258	285	90	17	50	1452	20	316	1464	231
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	49	58	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	42	42	22	56	56
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.28	0.07	0.40	0.40	0.21	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.25	0.06	0.03	0.30	0.01	0.19	0.32	0.32
s, saturation flow rate [veh/h]	1311	1800	1530	1086	1750	1619	4631	1445	1619	3427	1678
c, Capacity [veh/h]	348	497	423	323	483	119	1844	576	342	1838	900
d1, Uniform Delay [s]	33.37	28.47	32.94	41.23	29.28	46.56	27.38	19.29	40.35	16.67	16.73
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.11	0.11	1.34	7.01	0.22	2.30	3.15	0.11	9.46	1.47	3.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.09	0.12	0.59	0.86	0.22	0.41	0.77	0.03	0.90	0.60	0.61
d, Delay for Lane Group [s/veh]	33.48	28.57	34.28	48.24	29.50	48.86	30.53	19.39	49.81	18.14	19.79
Lane Group LOS	C	C	C	D	C	D	C	B	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.67	1.13	5.63	7.86	2.05	1.25	9.84	0.28	8.19	8.29	8.61
50th-Percentile Queue Length [ft/ln]	16.74	28.18	140.86	196.62	51.16	31.29	246.08	7.05	204.70	207.33	215.15
95th-Percentile Queue Length [veh/ln]	1.21	2.03	9.53	12.46	3.68	2.25	14.99	0.51	12.88	13.02	13.42
95th-Percentile Queue Length [ft/ln]	30.14	50.72	238.18	311.60	92.09	56.32	374.72	12.69	322.02	325.40	335.43

Movement, Approach, & Intersection Results

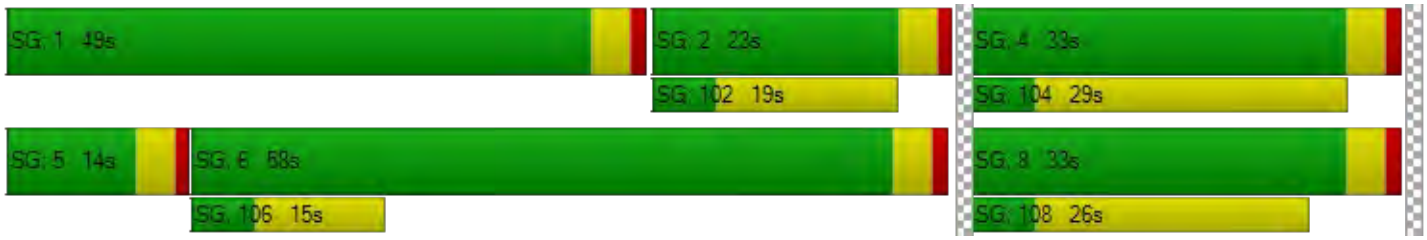
d_M, Delay for Movement [s/veh]	33.48	28.57	34.28	48.24	29.50	29.50	48.86	30.53	19.39	49.81	18.51	19.79
Movement LOS	C	C	C	D	C	C	D	C	B	D	B	B
d_A, Approach Delay [s/veh]	33.22			43.13			30.99			23.57		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	28.80											
Intersection LOS	C											
Intersection V/C	0.795											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	43.92	43.92	43.92	43.92
l_p,int, Pedestrian LOS Score for Intersection	2.324	2.181	3.379	3.901
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	552	552	362	1028
d_b, Bicycle Delay [s]	27.54	27.54	35.25	12.41
l_b,int, Bicycle LOS Score for Intersection	2.124	2.188	2.373	2.635
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.677

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	84	0	338	95	0	206	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	461	0	449	0	1661	95	0	1510	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	118	0	115	0	424	24	0	385	0
Total Analysis Volume [veh/h]	0	0	0	470	0	458	0	1695	97	0	1541	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	31	31	31	31
g / C, Green / Cycle		0.35	0.35	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.16	0.29	0.34	0.06	0.31	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		1031	533	2543	794	2543	794
d1, Uniform Delay [s]		15.12	18.07	10.53	7.42	10.06	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.31	3.86	1.33	0.31	1.03	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.45	0.84	0.65	0.12	0.59	0.00
d, Delay for Lane Group [s/veh]		15.43	21.93	11.86	7.73	11.09	0.00
Lane Group LOS		B	C	B	A	B	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.23	5.65	3.85	0.50	3.98	0.00
50th-Percentile Queue Length [ft/ln]		55.68	141.32	96.36	12.41	99.50	0.00
95th-Percentile Queue Length [veh/ln]		4.01	9.55	6.94	0.89	7.16	0.00
95th-Percentile Queue Length [ft/ln]		100.22	238.80	173.45	22.34	179.11	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.43	0.00	21.93	0.00	11.86	7.73	0.00	11.09	0.00
Movement LOS				B		C		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			18.63			11.64			11.09		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.70	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.334	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1099	633	633
d_b, Bicycle Delay [s]	30.03	6.09	14.03	14.03
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.525	2.390
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.685

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	65	0	0	0	0	0	0	212	126	0	141	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	263	4	803	0	0	0	0	1718	126	0	1732	420
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	1	206	0	0	0	0	441	32	0	445	108
Total Analysis Volume [veh/h]	270	4	825	0	0	0	0	1766	129	0	1780	432
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		33	33	33	33
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.15	0.26	0.26		0.35	0.08	0.35	0.27
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	560	501	500		2649	827	2649	827
d1, Uniform Delay [s]	16.12	18.52	18.53		9.79	6.93	9.83	8.77
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	3.20	3.22		1.25	0.39	1.28	2.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.81	0.81		0.65	0.15	0.65	0.51
d, Delay for Lane Group [s/veh]	16.73	21.72	21.75		11.04	7.32	11.11	11.01
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.70	5.03	5.04		3.72	0.62	3.77	2.75
50th-Percentile Queue Length [ft/ln]	67.42	125.78	125.92		92.88	15.52	94.13	68.83
95th-Percentile Queue Length [veh/ln]	4.85	8.71	8.72		6.69	1.12	6.78	4.96
95th-Percentile Queue Length [ft/ln]	121.36	217.74	217.94		167.18	27.93	169.44	123.90

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.73	21.72	21.73	0.00	0.00	0.00	0.00	11.04	7.32	0.00	11.11	11.01
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.50			0.00			10.79			11.09		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.685											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.403	1.818	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.325	4.132	2.574	2.743
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



OPENING YEAR (2024) WITH PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro
Report File: C:\...\AMOYW.pdf

Scenario 3 Opening Year (2024) With Project AM Peak Hour
8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.006	12.7	B
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.110	9.2	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.545	15.6	B
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.493	10.1	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.487	5.9	A
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.001	8.5	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.006	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.019	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	196	208	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	3	12	13	3	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	207	228	13	3	22
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	58	64	4	1	6
Total Analysis Volume [veh/h]	61	233	257	15	3	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.01	0.03
d_M, Delay for Movement [s/veh]	7.75	0.00	0.00	0.00	12.71	9.61
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.32	2.32	0.00	0.00	2.60	2.60
d_A, Approach Delay [s/veh]	1.60		0.00		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.27					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.110

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	5	163	1	7	140
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	101	2	0	43	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	106	172	1	50	146
Peak Hour Factor	0.8560	0.8560	0.8560	0.8560	0.8560	0.8560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	31	50	0	15	43
Total Analysis Volume [veh/h]	0	124	201	1	58	171
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.11	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	10.93	9.21	0.00	0.00	7.60	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.37	0.00	0.00	0.09	0.04
95th-Percentile Queue Length [ft/ln]	0.00	9.29	0.00	0.00	2.14	1.07
d_A, Approach Delay [s/veh]	9.21		0.00		1.94	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.85					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.545

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	4	12	97	137	26	11	30	926	8	193	607	132
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	43	0	0	3	106	0	0	435	98
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	12	101	186	27	11	34	1069	8	201	1067	235
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	27	50	7	3	9	288	2	54	288	63
Total Analysis Volume [veh/h]	4	13	109	201	29	12	37	1153	9	217	1151	254
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	14	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	14	14	14	14	14	5	34	34	10	39	39
g / C, Green / Cycle	0.21	0.21	0.21	0.21	0.21	0.07	0.48	0.48	0.14	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.14	0.02	0.02	0.23	0.01	0.12	0.26	0.26
s, saturation flow rate [veh/h]	1391	1800	1530	1300	1713	1619	4631	1445	1619	3427	1639
c, Capacity [veh/h]	320	370	315	322	352	113	2223	694	231	1896	907
d1, Uniform Delay [s]	25.02	22.24	23.65	28.24	22.59	30.97	12.31	9.52	29.37	9.40	9.40
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.02	0.04	0.58	1.64	0.13	1.49	0.75	0.03	10.60	0.82	1.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.32	0.58	0.11	0.30	0.48	0.01	0.87	0.46	0.46
d, Delay for Lane Group [s/veh]	25.03	22.28	24.24	29.88	22.73	32.46	13.06	9.55	39.97	10.23	11.12
Lane Group LOS	C	C	C	C	C	C	B	A	D	B	B
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.06	0.16	1.41	3.03	0.50	0.54	3.09	0.06	3.64	3.13	3.22
50th-Percentile Queue Length [ft/ln]	1.39	3.88	35.18	75.63	12.51	13.59	77.36	1.42	90.92	78.26	80.49
95th-Percentile Queue Length [veh/ln]	0.10	0.28	2.53	5.45	0.90	0.98	5.57	0.10	6.55	5.63	5.80
95th-Percentile Queue Length [ft/ln]	2.50	6.98	63.32	136.13	22.52	24.46	139.25	2.56	163.66	140.87	144.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.03	22.28	24.24	29.88	22.73	22.73	32.46	13.06	9.55	39.97	10.38	11.12
Movement LOS	C	C	C	C	C	C	C	B	A	D	B	B
d_A, Approach Delay [s/veh]	24.06			28.67			13.63			14.45		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.60											
Intersection LOS	B											
Intersection V/C	0.545											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.59	26.59	26.59	26.59
l_p,int, Pedestrian LOS Score for Intersection	2.206	2.093	3.165	3.511
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	828	828	543	543
d_b, Bicycle Delay [s]	12.02	12.02	18.59	18.59
l_b,int, Bicycle LOS Score for Intersection	1.753	1.929	2.171	2.386
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.493

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	308	0	177	0	1009	153	0	756	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	157	0	109	40	0	376	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	320	0	341	0	1159	40	0	1163	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	85	0	90	0	307	11	0	308	0
Total Analysis Volume [veh/h]	0	0	0	339	0	361	0	1228	42	0	1232	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		16	16	36	36	36	36
g / C, Green / Cycle		0.27	0.27	0.59	0.59	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate		0.11	0.22	0.24	0.03	0.24	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		815	421	2902	906	2902	906
d1, Uniform Delay [s]		17.73	20.35	6.57	5.15	6.57	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.31	3.89	0.41	0.09	0.41	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.39	0.81	0.40	0.04	0.40	0.00
d, Delay for Lane Group [s/veh]		18.04	24.23	6.98	5.24	6.99	0.00
Lane Group LOS		B	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.69	4.51	1.63	0.15	2.10	0.00
50th-Percentile Queue Length [ft/ln]		42.29	112.67	40.78	3.66	52.51	0.00
95th-Percentile Queue Length [veh/ln]		3.05	7.99	2.94	0.26	3.78	0.00
95th-Percentile Queue Length [ft/ln]		76.13	199.71	73.40	6.59	94.52	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	18.04	0.00	24.23	0.00	6.98	5.24	0.00	6.99	0.00
Movement LOS				B		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			21.23			6.92			6.99		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	10.08											
Intersection LOS	B											
Intersection V/C	0.493											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.273	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.219	2.199
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	5.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.487

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	82	3	41	0	0	0	0	1016	303	0	1103	461
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	128	0	0	0	0	0	0	60	49	0	248	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	213	3	43	0	0	0	0	1117	49	0	1396	480
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	1	11	0	0	0	0	291	13	0	364	125
Total Analysis Volume [veh/h]	222	3	45	0	0	0	0	1164	51	0	1454	500
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	10	10		42	42	42	42
g / C, Green / Cycle	0.17	0.17	0.17		0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.12	0.01	0.01		0.23	0.03	0.28	0.31
s, saturation flow rate [veh/h]	1714	1560	1530		4903	1530	4903	1530
c, Capacity [veh/h]	286	260	255		3435	1072	3435	1072
d1, Uniform Delay [s]	23.88	21.23	21.23		3.50	2.79	3.77	3.93
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.97	0.15	0.15		0.25	0.08	0.36	1.36
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.09	0.09		0.33	0.05	0.41	0.45
d, Delay for Lane Group [s/veh]	27.84	21.37	21.38		3.75	2.87	4.13	5.29
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	Yes	No	No		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.00	0.27	0.27		0.66	0.08	0.89	1.24
50th-Percentile Queue Length [ft/ln]	75.04	6.76	6.66		16.38	2.11	22.25	30.98
95th-Percentile Queue Length [veh/ln]	5.40	0.49	0.48		1.18	0.15	1.60	2.23
95th-Percentile Queue Length [ft/ln]	135.07	12.17	11.99		29.49	3.79	40.05	55.76

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.84	21.37	21.37	0.00	0.00	0.00	0.00	3.75	2.87	0.00	4.13	5.29
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	26.69			0.00			3.71			4.43		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	5.92											
Intersection LOS	A											
Intersection V/C	0.487											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.187	1.875	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	1.987	4.132	2.201	2.591
Bicycle LOS	A	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	0	0	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.51	8.31	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.51		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.25					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	1	1	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	0	1	1	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6
Total Analysis Volume [veh/h]	6	0	0	1	1	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.37	7.24	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.45	0.45	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.019

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	0	0	7	23	45
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	0	7	23	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	0	2	6	12
Total Analysis Volume [veh/h]	19	0	0	7	24	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.57	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.43	1.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.71					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro
Report File: C:\...\PMOYW.pdf

Scenario 3 Opening Year (2024) With Project PM Peak Hour
8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.044	19.0	C
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.008	14.5	B
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.834	30.0	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.686	13.2	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.687	13.0	B
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	WB Thru	0.000	0.0	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.015	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.035	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.044

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	443	417	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	10	7	7	12	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	471	441	7	12	37
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	129	120	2	3	10
Total Analysis Volume [veh/h]	30	515	482	8	13	40
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.04	0.06
d_M, Delay for Movement [s/veh]	8.24	0.00	0.00	0.00	19.01	11.71
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.35	0.35
95th-Percentile Queue Length [ft/ln]	1.14	1.14	0.00	0.00	8.66	8.66
d_A, Approach Delay [s/veh]	0.45		0.00		13.50	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.89					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.008

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	3	19	287	9	12	335
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	49	2	0	68	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	69	301	9	80	351
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	18	80	2	21	94
Total Analysis Volume [veh/h]	3	74	322	10	85	375
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.08	0.00	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	14.48	9.50	0.00	0.00	7.95	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.26	0.00	0.00	0.14	0.07
95th-Percentile Queue Length [ft/ln]	0.59	6.46	0.00	0.00	3.49	1.74
d_A, Approach Delay [s/veh]	9.70		0.00		1.47	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.64					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	30.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.834

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	31	57	241	236	84	15	46	970	18	295	1111	194
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	66	0	2	2	402	0	0	267	47
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	59	251	312	87	18	50	1411	19	307	1423	249
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	15	65	80	22	5	13	363	5	79	366	64
Total Analysis Volume [veh/h]	33	61	258	321	90	19	51	1452	20	316	1464	256
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	39	48	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	7	34	34	20	47	47
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.31	0.08	0.36	0.36	0.21	0.49	0.49
(v / s)_i Volume / Saturation Flow Rate	0.02	0.03	0.16	0.29	0.06	0.03	0.30	0.01	0.19	0.33	0.33
s, saturation flow rate [veh/h]	1309	1800	1530	1086	1747	1619	4631	1445	1619	3427	1667
c, Capacity [veh/h]	392	550	467	361	533	127	1646	514	345	1681	818
d1, Uniform Delay [s]	28.05	23.74	27.47	36.14	24.43	41.72	28.42	20.02	36.36	18.36	18.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.09	0.09	0.97	6.67	0.18	2.01	6.39	0.13	8.74	2.14	4.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.08	0.11	0.54	0.86	0.20	0.40	0.86	0.04	0.89	0.67	0.67
d, Delay for Lane Group [s/veh]	28.14	23.82	28.43	42.81	24.61	43.72	34.81	20.16	45.09	20.50	22.95
Lane Group LOS	C	C	C	D	C	D	C	C	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.57	0.96	4.77	7.93	1.75	1.13	9.91	0.27	7.28	8.54	8.96
50th-Percentile Queue Length [ft/ln]	14.30	23.91	119.21	198.26	43.85	28.29	247.84	6.84	181.98	213.62	224.01
95th-Percentile Queue Length [veh/ln]	1.03	1.72	8.35	12.55	3.16	2.04	15.08	0.49	11.70	13.34	13.87
95th-Percentile Queue Length [ft/ln]	25.74	43.03	208.74	313.72	78.93	50.92	376.94	12.31	292.60	333.47	346.74

Movement, Approach, & Intersection Results

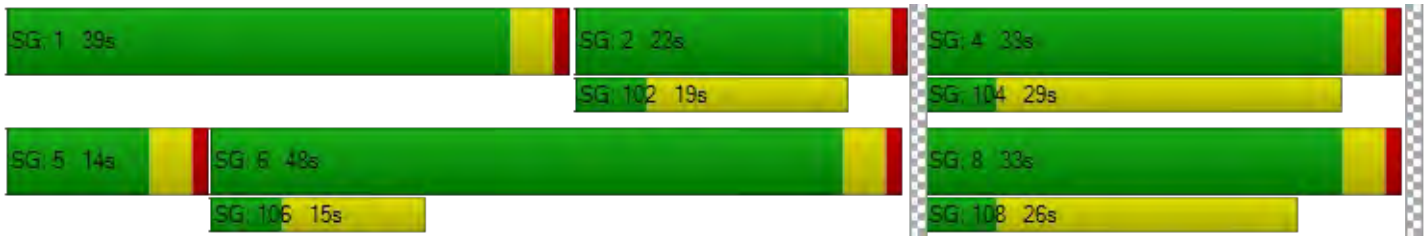
d_M, Delay for Movement [s/veh]	28.14	23.82	28.43	42.81	24.61	24.61	43.72	34.81	20.16	45.09	21.02	22.95
Movement LOS	C	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	27.61			38.23			34.93			25.00		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	30.00											
Intersection LOS	C											
Intersection V/C	0.834											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	38.96	38.96	38.96	38.96
l_p,int, Pedestrian LOS Score for Intersection	2.319	2.196	3.375	3.960
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	610	610	400	926
d_b, Bicycle Delay [s]	22.96	22.96	30.44	13.72
l_b,int, Bicycle LOS Score for Intersection	2.124	2.248	2.374	2.648
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.686

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	443	0	351	0	1272	178	0	1253	418
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0404	1.0000	1.0404	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	90	0	360	108	0	224	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	461	0	455	0	1683	108	0	1528	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9800	0.9440	0.9800	0.9440	0.9800	0.9800	0.9440	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	118	0	116	0	429	28	0	390	0
Total Analysis Volume [veh/h]	0	0	0	470	0	464	0	1717	110	0	1559	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		21	21	31	31	31	31
g / C, Green / Cycle		0.35	0.35	0.52	0.52	0.52	0.52
(v / s)_i Volume / Saturation Flow Rate		0.16	0.30	0.34	0.07	0.31	0.00
s, saturation flow rate [veh/h]		2959	1530	4903	1530	4903	1530
c, Capacity [veh/h]		1042	539	2525	788	2525	788
d1, Uniform Delay [s]		14.95	17.96	10.77	7.61	10.27	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.30	3.88	1.42	0.36	1.09	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.44	0.84	0.67	0.14	0.61	0.00
d, Delay for Lane Group [s/veh]		15.24	21.84	12.19	7.97	11.36	0.00
Lane Group LOS		B	C	B	A	B	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.21	5.72	4.00	0.58	4.10	0.00
50th-Percentile Queue Length [ft/ln]		55.23	142.97	99.96	14.45	102.57	0.00
95th-Percentile Queue Length [veh/ln]		3.98	9.64	7.20	1.04	7.39	0.00
95th-Percentile Queue Length [ft/ln]		99.42	241.01	179.92	26.01	184.63	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	15.24	0.00	21.84	0.00	12.19	7.97	0.00	11.36	0.00
Movement LOS				B		C		B	A		B	A
d_A, Approach Delay [s/veh]	0.00			18.52			11.93			11.36		
Approach LOS	A			B			B			B		
d_I, Intersection Delay [s/veh]	13.15											
Intersection LOS	B											
Intersection V/C	0.686											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.70	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.335	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1099	633	633
d_b, Bicycle Delay [s]	30.03	6.09	14.03	14.03
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.545	2.400
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.687

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	190	4	772	0	0	0	0	1448	225	0	1529	404
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0404	1.0404	1.0404	1.0000	1.0000	1.0000	1.0000	1.0404	1.0404	1.0000	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	74	0	0	0	0	0	0	225	135	0	150	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	272	4	803	0	0	0	0	1731	135	0	1741	420
Peak Hour Factor	0.9730	0.9730	0.9730	0.9600	0.9600	0.9600	0.9600	0.9730	0.9730	0.9600	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	70	1	206	0	0	0	0	445	35	0	447	108
Total Analysis Volume [veh/h]	280	4	825	0	0	0	0	1779	139	0	1789	432
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		33	33	33	33
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.16	0.26	0.26		0.35	0.09	0.36	0.27
s, saturation flow rate [veh/h]	1714	1532	1530		4903	1530	4903	1530
c, Capacity [veh/h]	561	501	500		2648	826	2648	826
d1, Uniform Delay [s]	16.20	18.50	18.51		9.84	6.98	9.87	8.78
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	3.18	3.21		1.28	0.43	1.30	2.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.81	0.81		0.65	0.16	0.66	0.51
d, Delay for Lane Group [s/veh]	16.85	21.68	21.72		11.12	7.41	11.18	11.02
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.81	5.03	5.03		3.77	0.67	3.80	2.76
50th-Percentile Queue Length [ft/ln]	70.18	125.65	125.80		94.17	16.77	95.08	68.92
95th-Percentile Queue Length [veh/ln]	5.05	8.70	8.71		6.78	1.21	6.85	4.96
95th-Percentile Queue Length [ft/ln]	126.33	217.57	217.77		169.51	30.19	171.14	124.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.85	21.68	21.70	0.00	0.00	0.00	0.00	11.12	7.41	0.00	11.18	11.02
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.48			0.00			10.86			11.15		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.01											
Intersection LOS	B											
Intersection V/C	0.687											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.408	1.818	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.340	4.132	2.586	2.748
Bicycle LOS	C	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	1	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	0	0	0	1	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	0	0	3
Total Analysis Volume [veh/h]	16	0	0	0	1	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.38	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.12	1.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.035

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0404	1.0404	1.0404	1.0404	1.0404	1.0404
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	16	12	21
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	0	16	13	21
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	4	3	6
Total Analysis Volume [veh/h]	36	0	0	17	14	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.53	7.26	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.70	2.70	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	A					

GENERAL PLAN BUILDOUT (2040) WITHOUT PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 4 General Plan Buildout Without Project AM Peak Hour

Report File: C:\...\AM40WO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Thru	0.006	0.0	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.052	9.0	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.715	24.9	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.446	8.8	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.546	8.1	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	240	620	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	240	620	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	63	163	0	0	0
Total Analysis Volume [veh/h]	0	253	653	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.71	0.00	0.00	0.00	15.94	12.32
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		14.13	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.052

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	49	179	17	403	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	49	179	17	403	154
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	47	4	106	41
Total Analysis Volume [veh/h]	0	52	188	18	424	162
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.05	0.00	0.00	0.29	0.00
d_M, Delay for Movement [s/veh]	28.58	9.02	0.00	0.00	8.17	0.00
Movement LOS	D	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.16	0.00	0.00	0.86	0.43
95th-Percentile Queue Length [ft/ln]	0.00	4.10	0.00	0.00	21.61	10.80
d_A, Approach Delay [s/veh]	9.02		0.00		5.91	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.66					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.715

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	115	19	16	19	268	2	56	241	85
Total Analysis Volume [veh/h]	5	24	113	459	77	63	78	1073	9	223	964	340
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	24	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	27	27	12	31	31
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.10	0.34	0.34	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.34	0.08	0.04	0.20	0.01	0.12	0.23	0.23
s, saturation flow rate [veh/h]	1277	1900	1615	1280	1760	1714	5176	1615	1714	3618	1657
c, Capacity [veh/h]	456	689	585	515	638	175	1754	547	255	1396	639
d1, Uniform Delay [s]	20.45	16.49	17.45	27.11	17.63	33.78	21.81	17.61	33.12	19.76	19.76
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.02	0.15	4.12	0.16	1.63	1.42	0.05	7.27	2.00	4.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.18	0.85	0.21	0.42	0.58	0.02	0.83	0.61	0.61
d, Delay for Lane Group [s/veh]	20.46	16.51	17.60	31.24	17.79	35.40	23.23	17.67	40.40	21.76	24.11
Lane Group LOS	C	B	B	C	B	D	C	B	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.27	1.32	8.51	1.65	1.33	4.84	0.11	4.18	5.86	5.79
50th-Percentile Queue Length [ft/ln]	1.66	6.67	32.97	212.71	41.35	33.29	121.03	2.68	104.54	146.58	144.75
95th-Percentile Queue Length [veh/ln]	0.12	0.48	2.37	13.29	2.98	2.40	8.45	0.19	7.53	9.83	9.74
95th-Percentile Queue Length [ft/ln]	2.98	12.00	59.34	332.30	74.42	59.92	211.24	4.82	188.18	245.86	243.41

Movement, Approach, & Intersection Results

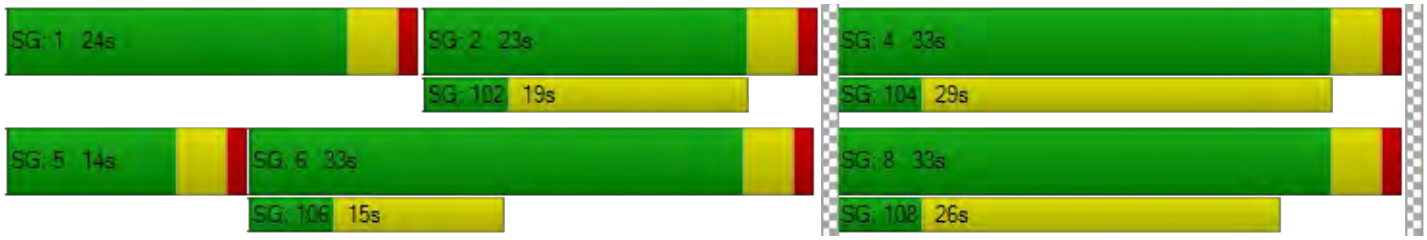
d_M, Delay for Movement [s/veh]	20.46	16.51	17.60	31.24	17.79	17.79	35.40	23.23	17.67	40.40	21.93	24.11
Movement LOS	C	B	B	C	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	17.52			28.09			24.00			25.11		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	24.94											
Intersection LOS	C											
Intersection V/C	0.715											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.55	31.55	31.55	31.55
l_p,int, Pedestrian LOS Score for Intersection	2.231	2.257	3.151	3.909
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	724	724	475	724
d_b, Bicycle Delay [s]	16.29	16.29	23.29	16.29
l_b,int, Bicycle LOS Score for Intersection	1.782	2.498	2.166	2.358
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.446

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	339	0	274	0	1152	168	0	1276	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	339	0	274	0	1152	0	0	1276	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	72	0	303	0	0	336	0
Total Analysis Volume [veh/h]	0	0	0	357	0	288	0	1213	0	0	1343	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		13	13	39	39	39	39
g / C, Green / Cycle		0.22	0.22	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.10	0.17	0.22	0.00	0.25	0.00
s, saturation flow rate [veh/h]		3329	1615	5176	1615	5176	1615
c, Capacity [veh/h]		745	361	3330	1039	3330	1039
d1, Uniform Delay [s]		20.20	21.85	4.92	0.00	5.08	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.44	3.35	0.29	0.00	0.34	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.46	0.76	0.35	0.00	0.38	0.00
d, Delay for Lane Group [s/veh]		20.63	25.20	5.21	0.00	5.42	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.95	3.67	1.15	0.00	1.83	0.00
50th-Percentile Queue Length [ft/ln]		48.76	91.70	28.68	0.00	45.67	0.00
95th-Percentile Queue Length [veh/ln]		3.51	6.60	2.07	0.00	3.29	0.00
95th-Percentile Queue Length [ft/ln]		87.77	165.06	51.63	0.00	82.21	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.63	0.00	25.20	0.00	5.21	0.00	0.00	5.42	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			22.67			5.21			5.42		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	8.82											
Intersection LOS	A											
Intersection V/C	0.446											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.261	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.193	2.261
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.546

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	137	4	452	0	0	0	0	1189	333	0	1583	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	137	4	452	0	0	0	0	1189	0	0	1583	566
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	1	119	0	0	0	0	313	0	0	417	149
Total Analysis Volume [veh/h]	144	4	476	0	0	0	0	1252	0	0	1666	596
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12		40	40	40	40
g / C, Green / Cycle	0.19	0.19	0.19		0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.08	0.14	0.14		0.23	0.00	0.31	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	333	315	314		3482	1086	3482	1086
d1, Uniform Delay [s]	21.23	22.74	22.74		4.19	0.00	4.64	4.96
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	3.24	3.25		0.27	0.00	0.43	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.73	0.73		0.34	0.00	0.45	0.52
d, Delay for Lane Group [s/veh]	22.05	25.99	26.00		4.45	0.00	5.07	6.76
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.65	3.10	3.09		0.94	0.00	1.40	1.98
50th-Percentile Queue Length [ft/ln]	41.29	77.42	77.24		23.44	0.00	34.91	49.61
95th-Percentile Queue Length [veh/ln]	2.97	5.57	5.56		1.69	0.00	2.51	3.57
95th-Percentile Queue Length [ft/ln]	74.32	139.35	139.04		42.20	0.00	62.85	89.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.05	25.99	25.99	0.00	0.00	0.00	0.00	4.45	0.00	0.00	5.07	6.76
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	25.08			0.00			4.45			5.52		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	8.15											
Intersection LOS	A											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.256	1.960	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	2.538	4.132	2.214	2.742
Bicycle LOS	B	D	B	B

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 4 General Plan Buildout Without Project PM Peak Hour

Report File: C:\...\PM40WO.pdf

8/15/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	NB Left	0.001	8.4	A
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.050	15.5	C
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	1.036	160.2	F
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.668	12.2	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.729	13.5	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	810	500	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	810	500	0	0	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	213	132	0	0	0
Total Analysis Volume [veh/h]	1	853	526	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.35	0.00	0.00	0.00	25.41	11.26
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.01		0.00		18.34	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.050

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	352	328	21	79	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	352	328	21	79	369
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	93	86	6	21	97
Total Analysis Volume [veh/h]	19	371	345	22	83	388
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.42	0.00	0.00	0.06	0.00
d_M, Delay for Movement [s/veh]	15.51	12.29	0.00	0.00	8.04	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.16	2.12	0.00	0.00	0.14	0.07
95th-Percentile Queue Length [ft/ln]	3.94	53.10	0.00	0.00	3.44	1.72
d_A, Approach Delay [s/veh]	12.45		0.00		1.42	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.49					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	160.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.036

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	145	37	8	38	335	5	86	322	141
Total Analysis Volume [veh/h]	36	127	279	580	146	34	151	1341	21	342	1286	564
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	57	0	0	57	0	14	29	0	24	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	53	53	53	53	53	10	25	25	20	35	35
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.48	0.09	0.23	0.23	0.18	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.16	0.54	0.09	0.08	0.25	0.01	0.19	0.33	0.34
s, saturation flow rate [veh/h]	1233	1900	1615	1013	1839	1714	5176	1615	1714	3618	1623
c, Capacity [veh/h]	572	914	777	501	885	157	1178	368	313	1151	517
d1, Uniform Delay [s]	19.66	15.85	17.75	34.55	16.36	49.63	42.59	33.31	45.09	37.60	37.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.06	0.26	189.69	0.11	21.87	164.68	0.28	95.96	108.70	172.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.13	0.34	1.10	0.19	0.91	1.08	0.05	1.04	1.05	1.07
d, Delay for Lane Group [s/veh]	19.71	15.91	18.01	224.24	16.46	71.50	207.27	33.59	141.05	146.29	209.76
Lane Group LOS	B	B	B	F	B	E	F	C	F	F	F
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.54	1.69	4.17	40.24	2.47	4.70	28.05	0.43	16.45	31.79	37.63
50th-Percentile Queue Length [ft/ln]	13.39	42.34	104.26	1006.07	61.82	117.52	701.29	10.77	411.17	794.66	940.75
95th-Percentile Queue Length [veh/ln]	0.96	3.05	7.51	54.55	4.45	8.26	38.49	0.78	23.58	42.31	50.08
95th-Percentile Queue Length [ft/ln]	24.11	76.21	187.66	1363.75	111.27	206.41	962.13	19.38	589.57	1057.71	1252.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.71	15.91	18.01	224.24	16.46	16.46	71.50	207.27	33.59	141.05	147.26	209.76
Movement LOS	B	B	B	F	B	B	E	F	C	F	F	F
d_A, Approach Delay [s/veh]	17.54			175.03			191.34			162.38		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	160.22											
Intersection LOS	F											
Intersection V/C	1.036											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.44	46.44	46.44	46.44
l_p,int, Pedestrian LOS Score for Intersection	2.363	2.446	3.339	4.358
Crosswalk LOS	B	B	C	E
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	962	962	454	636
d_b, Bicycle Delay [s]	14.82	14.82	32.91	25.63
l_b,int, Bicycle LOS Score for Intersection	2.253	2.751	2.350	2.705
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.668

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	496	0	423	0	1874	196	0	1378	460
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	496	0	423	0	1874	0	0	1378	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	131	0	111	0	493	0	0	363	0
Total Analysis Volume [veh/h]	0	0	0	522	0	445	0	1973	0	0	1451	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		19	19	33	33	33	33
g / C, Green / Cycle		0.32	0.32	0.55	0.55	0.55	0.55
(v / s)_i Volume / Saturation Flow Rate		0.16	0.26	0.36	0.00	0.27	0.00
s, saturation flow rate [veh/h]		3144	1615	5176	1615	5176	1615
c, Capacity [veh/h]		1010	519	2825	882	2825	882
d1, Uniform Delay [s]		16.46	18.79	9.73	0.00	8.46	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.37	3.28	1.25	0.00	0.61	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.49	0.82	0.66	0.00	0.49	0.00
d, Delay for Lane Group [s/veh]		16.84	22.06	10.98	0.00	9.07	0.00
Lane Group LOS		B	C	B	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.54	5.32	4.02	0.00	3.09	0.00
50th-Percentile Queue Length [ft/ln]		63.62	133.10	100.59	0.00	77.25	0.00
95th-Percentile Queue Length [veh/ln]		4.58	9.11	7.24	0.00	5.56	0.00
95th-Percentile Queue Length [ft/ln]		114.52	227.71	181.06	0.00	139.05	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.84	0.00	22.06	0.00	10.98	0.00	0.00	9.07	0.00
Movement LOS				B		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			19.24			10.98			9.07		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.17											
Intersection LOS	B											
Intersection V/C	0.668											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.336	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.590	2.318
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.729

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	245	7	849	0	0	0	0	2024	248	0	1682	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	245	7	849	0	0	0	0	2024	0	0	1682	573
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	64	2	223	0	0	0	0	533	0	0	443	151
Total Analysis Volume [veh/h]	258	7	894	0	0	0	0	2131	0	0	1771	603
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		32	32	32	32
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.26	0.27		0.39	0.00	0.32	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	564	533	531		2785	869	2785	869
d1, Uniform Delay [s]	15.81	18.42	18.43		10.55	0.00	9.52	9.96
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	2.96	3.00		1.71	0.00	0.98	3.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.80	0.81		0.73	0.00	0.60	0.66
d, Delay for Lane Group [s/veh]	16.34	21.38	21.44		12.26	0.00	10.50	13.94
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.47	5.29	5.30		4.77	0.00	3.50	4.43
50th-Percentile Queue Length [ft/ln]	61.64	132.18	132.42		119.21	0.00	87.44	110.75
95th-Percentile Queue Length [veh/ln]	4.44	9.06	9.07		8.35	0.00	6.30	7.88
95th-Percentile Queue Length [ft/ln]	110.95	226.45	226.78		208.75	0.00	157.39	197.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.34	21.38	21.41	0.00	0.00	0.00	0.00	12.26	0.00	0.00	10.50	13.94
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.28			0.00			12.26			11.38		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.53											
Intersection LOS	B											
Intersection V/C	0.729											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.380	1.970	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.376	4.132	2.673	2.800
Bicycle LOS	C	D	B	C

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



GENERAL PLAN BUILDOUT (2040) WITH PROJECT

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\AME.vistro

Scenario 5 General Plan Buildout With Project AM Peak Hour

Report File: C:\...\AM40W.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.011	19.2	C
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Right	0.108	9.3	A
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	WB Left	0.733	25.6	C
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.463	9.0	A
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.546	8.2	A
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.001	8.5	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.006	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.019	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	19.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.011

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	0	240	620	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	54	0	0	13	3	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	240	620	13	3	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	63	163	3	1	6
Total Analysis Volume [veh/h]	57	253	653	14	3	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.01	0.00	0.01	0.05
d_M, Delay for Movement [s/veh]	8.81	0.00	0.00	0.00	19.17	12.87
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	2.32	2.32	0.00	0.00	4.49	4.49
d_A, Approach Delay [s/veh]	1.62		0.00		13.63	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.86					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.108

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	49	179	17	403	154
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	53	1	0	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	102	180	17	425	154
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	27	47	4	112	41
Total Analysis Volume [veh/h]	0	107	189	18	447	162
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.11	0.00	0.00	0.31	0.00
d_M, Delay for Movement [s/veh]	30.83	9.27	0.00	0.00	8.21	0.00
Movement LOS	D	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.36	0.00	0.00	0.93	0.46
95th-Percentile Queue Length [ft/ln]	0.00	9.07	0.00	0.00	23.15	11.58
d_A, Approach Delay [s/veh]	9.27		0.00		6.03	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	5.05					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	25.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.733

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	22	0	0	2	0	0	0	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	458	73	60	76	1019	9	212	916	374
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	121	19	16	20	268	2	56	241	98
Total Analysis Volume [veh/h]	5	24	113	482	77	63	80	1073	9	223	964	394
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	14	23	0	24	33	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	29	29	8	27	27	12	31	31
g / C, Green / Cycle	0.36	0.36	0.36	0.36	0.36	0.10	0.34	0.34	0.15	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.36	0.08	0.04	0.20	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1277	1900	1615	1280	1760	1714	5176	1615	1714	3618	1631
c, Capacity [veh/h]	456	689	585	515	638	177	1754	547	255	1392	628
d1, Uniform Delay [s]	20.45	16.49	17.45	27.74	17.63	33.74	21.81	17.61	33.12	20.11	20.11
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	0.02	0.15	5.93	0.16	1.66	1.42	0.05	7.27	2.28	5.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.01	0.03	0.18	0.89	0.21	0.43	0.58	0.02	0.83	0.64	0.64
d, Delay for Lane Group [s/veh]	20.46	16.51	17.60	33.66	17.79	35.40	23.23	17.67	40.40	22.39	25.14
Lane Group LOS	C	B	B	C	B	D	C	B	D	C	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.27	1.32	9.39	1.65	1.37	4.84	0.11	4.18	6.27	6.13
50th-Percentile Queue Length [ft/ln]	1.66	6.67	32.97	234.70	41.35	34.18	121.03	2.68	104.54	156.63	153.29
95th-Percentile Queue Length [veh/ln]	0.12	0.48	2.37	14.41	2.98	2.46	8.45	0.19	7.53	10.37	10.19
95th-Percentile Queue Length [ft/ln]	2.98	12.00	59.34	360.33	74.42	61.53	211.24	4.82	188.18	259.25	254.81

Movement, Approach, & Intersection Results

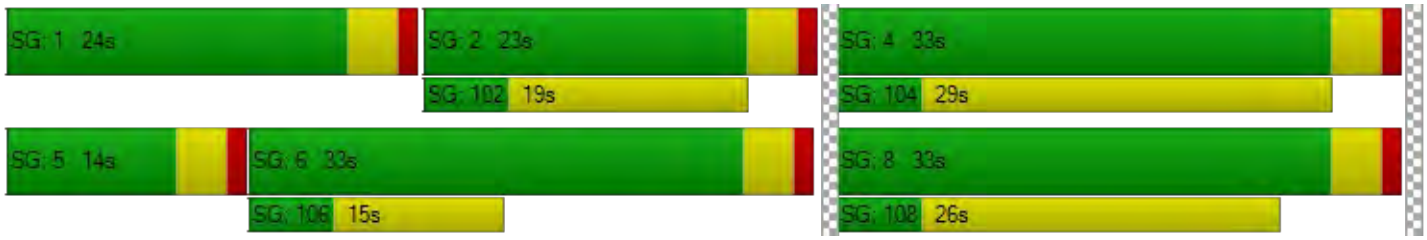
d_M, Delay for Movement [s/veh]	20.46	16.51	17.60	33.66	17.79	17.79	35.40	23.23	17.67	40.40	22.47	25.14
Movement LOS	C	B	B	C	B	B	D	C	B	D	C	C
d_A, Approach Delay [s/veh]	17.52			30.09			24.02			25.66		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	25.57											
Intersection LOS	C											
Intersection V/C	0.733											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.55	31.55	31.55	31.55
l_p,int, Pedestrian LOS Score for Intersection	2.231	2.282	3.152	3.958
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	724	724	475	724
d_b, Bicycle Delay [s]	16.29	16.29	23.29	16.29
l_b,int, Bicycle LOS Score for Intersection	1.782	2.535	2.167	2.386
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.463

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	339	0	274	0	1152	168	0	1276	562
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	15	0	13	9	0	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	339	0	289	0	1165	9	0	1312	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	89	0	76	0	307	2	0	345	0
Total Analysis Volume [veh/h]	0	0	0	357	0	304	0	1226	9	0	1381	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		14	14	38	38	38	38
g / C, Green / Cycle		0.23	0.23	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate		0.10	0.18	0.23	0.01	0.25	0.00
s, saturation flow rate [veh/h]		3329	1615	5176	1615	5176	1615
c, Capacity [veh/h]		776	376	3282	1024	3282	1024
d1, Uniform Delay [s]		19.72	21.57	5.20	4.05	5.40	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.39	3.40	0.30	0.02	0.37	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.44	0.77	0.35	0.01	0.40	0.00
d, Delay for Lane Group [s/veh]		20.11	24.96	5.50	4.07	5.76	0.00
Lane Group LOS		C	C	A	A	A	A
Critical Lane Group		No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]		1.92	3.85	1.24	0.03	1.99	0.00
50th-Percentile Queue Length [ft/ln]		47.95	96.35	31.10	0.63	49.76	0.00
95th-Percentile Queue Length [veh/ln]		3.45	6.94	2.24	0.05	3.58	0.00
95th-Percentile Queue Length [ft/ln]		86.31	173.43	55.98	1.14	89.56	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	20.11	0.00	24.96	0.00	5.50	4.07	0.00	5.76	0.00
Movement LOS				C		C		A	A		A	A
d_A, Approach Delay [s/veh]	0.00			22.34			5.49			5.76		
Approach LOS	A			C			A			A		
d_I, Intersection Delay [s/veh]	9.00											
Intersection LOS	A											
Intersection V/C	0.463											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.265	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.205	2.281
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	8.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.546

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	137	4	452	0	0	0	0	1189	333	0	1583	566
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	0	0	0	0	0	0	4	9	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	157	4	452	0	0	0	0	1193	9	0	1599	566
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	1	119	0	0	0	0	314	2	0	421	149
Total Analysis Volume [veh/h]	165	4	476	0	0	0	0	1256	9	0	1683	596
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	12		40	40	40	40
g / C, Green / Cycle	0.19	0.19	0.19		0.67	0.67	0.67	0.67
(v / s)_i Volume / Saturation Flow Rate	0.09	0.14	0.14		0.23	0.01	0.31	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	334	316	315		3478	1085	3478	1085
d1, Uniform Delay [s]	21.47	22.70	22.70		4.21	3.26	4.69	4.99
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.03	3.19	3.20		0.27	0.01	0.44	1.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.72	0.72		0.34	0.01	0.46	0.52
d, Delay for Lane Group [s/veh]	22.50	25.89	25.90		4.48	3.27	5.13	6.79
Lane Group LOS	C	C	C		A	A	A	A
Critical Lane Group	No	No	Yes		No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.92	3.09	3.08		0.95	0.02	1.43	2.00
50th-Percentile Queue Length [ft/ln]	48.07	77.24	77.07		23.71	0.48	35.68	49.90
95th-Percentile Queue Length [veh/ln]	3.46	5.56	5.55		1.71	0.03	2.57	3.59
95th-Percentile Queue Length [ft/ln]	86.53	139.03	138.73		42.67	0.87	64.22	89.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.50	25.89	25.90	0.00	0.00	0.00	0.00	4.48	3.27	0.00	5.13	6.79
Movement LOS	C	C	C					A	A		A	A
d_A, Approach Delay [s/veh]	25.02			0.00			4.47			5.56		
Approach LOS	C			A			A			A		
d_I, Intersection Delay [s/veh]	8.23											
Intersection LOS	A											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.263	1.960	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	2.571	4.132	2.221	2.750
Bicycle LOS	B	D	B	C

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.001

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	0	0	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	0	0	1
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	1	0	0	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.51	8.31	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.51		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.25					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	0	0	1	1	22
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	0	1	1	22
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	6
Total Analysis Volume [veh/h]	6	0	0	1	1	23
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.37	7.24	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.45	0.45	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.019

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	0	0	7	23	45
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	0	0	7	23	45
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	0	0	2	6	12
Total Analysis Volume [veh/h]	19	0	0	7	24	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.57	7.33	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.43	1.43	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.71					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 5 General Plan Buildout With Project PM Peak Hour

Report File: C:\...\PM40W.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Amargosa Rd (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	EB Left	0.077	29.8	D
2	Key Pointe Dr (NS) at Amargosa Rd (EW)	Two-way stop	HCM 7th Edition	NB Left	0.058	17.2	C
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	1.063	189.5	F
4	I-15 SB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Right	0.677	12.3	B
5	I-15 NB Ramps (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Right	0.732	13.6	B
6	Project West Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	WB Thru	0.000	0.0	A
7	Project Central Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.015	8.6	A
8	Project East Dwy (NS) at Palmetto Wy (EW)	Two-way stop	HCM 7th Edition	SB Left	0.035	8.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Amargosa Rd (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	29.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.077

Intersection Setup

Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name						
Base Volume Input [veh/h]	1	810	500	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	0	0	7	12	37
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	810	500	7	12	37
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	213	132	2	3	10
Total Analysis Volume [veh/h]	28	853	526	7	13	39
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.08	0.06
d_M, Delay for Movement [s/veh]	8.40	0.00	0.00	0.00	29.79	13.00
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.49	0.49
95th-Percentile Queue Length [ft/ln]	1.14	1.14	0.00	0.00	12.33	12.33
d_A, Approach Delay [s/veh]	0.27		0.00		17.12	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.76					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 2: Key Pointe Dr (NS) at Amargosa Rd (EW)

Control Type:	Two-way stop	Delay (sec / veh):	17.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.058

Intersection Setup

Name						
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	18	352	328	21	79	369
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	25	1	0	36	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	377	329	21	115	370
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	99	87	6	30	97
Total Analysis Volume [veh/h]	19	397	346	22	121	389
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.45	0.00	0.00	0.09	0.00
d_M, Delay for Movement [s/veh]	17.23	12.69	0.00	0.00	8.09	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	2.40	0.00	0.00	0.20	0.10
95th-Percentile Queue Length [ft/ln]	4.58	59.90	0.00	0.00	5.12	2.56
d_A, Approach Delay [s/veh]	12.90		0.00		1.92	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	4.90					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	189.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.063

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	35	0	1	1	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	586	139	33	144	1274	20	325	1222	560
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	154	37	9	38	335	5	86	322	147
Total Analysis Volume [veh/h]	36	127	279	617	146	35	152	1341	21	342	1286	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	10	10	0	10	10	0
Maximum Green [s]	0	130	0	0	130	0	130	130	0	130	130	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	70	0	0	70	0	14	33	0	27	46	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	66	66	66	66	66	10	29	29	23	42	42
g / C, Green / Cycle	0.51	0.51	0.51	0.51	0.51	0.08	0.22	0.22	0.18	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.06	0.16	0.58	0.09	0.08	0.25	0.01	0.19	0.34	0.35
s, saturation flow rate [veh/h]	1232	1900	1615	1013	1838	1714	5176	1615	1714	3618	1616
c, Capacity [veh/h]	599	964	819	521	932	133	1156	361	304	1169	522
d1, Uniform Delay [s]	20.89	16.90	18.93	38.39	17.46	60.07	50.58	39.78	53.58	44.09	44.09
k, delay calibration	0.11	0.11	0.11	0.16	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.04	0.06	0.23	235.47	0.09	178.64	199.04	0.29	141.41	106.66	174.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.06	0.13	0.32	1.13	0.18	1.08	1.10	0.06	1.07	1.04	1.08
d, Delay for Lane Group [s/veh]	20.93	16.96	19.15	273.86	17.55	238.71	249.63	40.07	194.99	150.75	218.87
Lane Group LOS	C	B	B	F	B	F	F	D	F	F	F
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.61	1.94	4.78	51.38	2.86	10.87	33.36	0.52	21.54	35.16	41.29
50th-Percentile Queue Length [ft/ln]	15.28	48.60	119.55	1284.47	71.40	271.85	833.96	13.03	538.38	879.11	1032.17
95th-Percentile Queue Length [veh/ln]	1.10	3.50	8.37	69.29	5.14	16.76	45.37	0.94	30.20	46.27	54.53
95th-Percentile Queue Length [ft/ln]	27.51	87.47	209.21	1732.26	128.52	418.92	1134.13	23.45	755.09	1156.83	1363.24

Movement, Approach, & Intersection Results

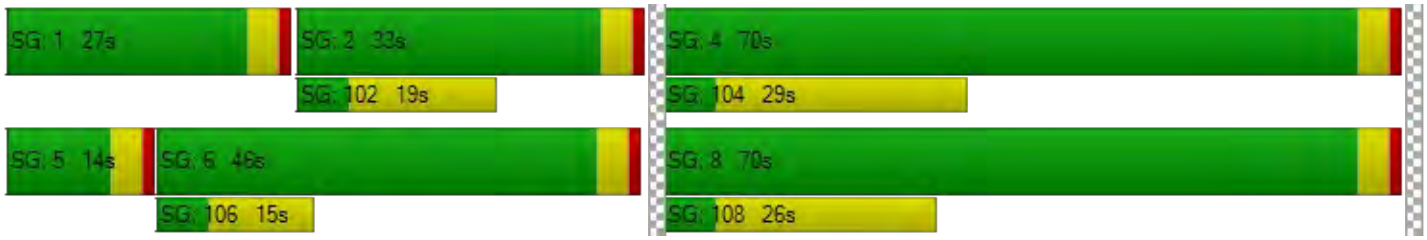
d_M, Delay for Movement [s/veh]	20.93	16.96	19.15	273.86	17.55	17.55	238.71	249.63	40.07	194.99	150.84	218.87
Movement LOS	C	B	B	F	B	B	F	F	D	F	F	F
d_A, Approach Delay [s/veh]	18.66			215.70			245.62			175.73		
Approach LOS	B			F			F			F		
d_I, Intersection Delay [s/veh]	189.46											
Intersection LOS	F											
Intersection V/C	1.063											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	56.38	56.38	56.38	56.38
l_p,int, Pedestrian LOS Score for Intersection	2.370	2.474	3.347	4.429
Crosswalk LOS	B	B	C	E
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1014	1014	446	645
d_b, Bicycle Delay [s]	15.80	15.80	39.30	29.84
l_b,int, Bicycle LOS Score for Intersection	2.253	2.810	2.351	2.718
Bicycle LOS	B	C	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: I-15 SB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.677

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	515.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	2
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			50.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present				No			No			No		
Crosswalk	No			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	496	0	423	0	1874	196	0	1378	460
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	0.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	6	0	22	13	0	18	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	496	0	429	0	1896	13	0	1396	0
Peak Hour Factor	0.9440	0.9440	0.9440	0.9500	0.9440	0.9500	0.9440	0.9500	0.9500	0.9440	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	131	0	113	0	499	3	0	367	0
Total Analysis Volume [veh/h]	0	0	0	522	0	452	0	1996	14	0	1469	0
Presence of On-Street Parking				No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	4.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Split	Permiss	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	0	0	7	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	0	0	10	0	0	0	10	0	0	10	0
Maximum Green [s]	0	0	0	130	0	0	0	130	0	0	130	0
Amber [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	37	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	0	0	5	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	0	0	10	0	0	0	10	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk				No				No			No	
I1, Start-Up Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall				No				No			No	
Maximum Recall				No				No			No	
Pedestrian Recall				No				No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group		L	R	C	R	C	R
C, Cycle Length [s]		60	60	60	60	60	60
L, Total Lost Time per Cycle [s]		4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]		0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]		2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]		19	19	33	33	33	33
g / C, Green / Cycle		0.32	0.32	0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate		0.16	0.27	0.37	0.01	0.27	0.00
s, saturation flow rate [veh/h]		3144	1615	5176	1615	5176	1615
c, Capacity [veh/h]		1021	525	2807	876	2807	876
d1, Uniform Delay [s]		16.29	18.68	9.95	6.36	8.64	0.00
k, delay calibration		0.11	0.11	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor		1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]		0.36	3.29	1.33	0.03	0.63	0.00
d3, Initial Queue Delay [s]		0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio		1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor		1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity		0.49	0.82	0.68	0.01	0.50	0.00
d, Delay for Lane Group [s/veh]		16.65	21.98	11.28	6.39	9.27	0.00
Lane Group LOS		B	C	B	A	A	A
Critical Lane Group		No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]		2.53	5.39	4.17	0.06	3.19	0.00
50th-Percentile Queue Length [ft/ln]		63.15	134.76	104.25	1.44	79.67	0.00
95th-Percentile Queue Length [veh/ln]		4.55	9.20	7.51	0.10	5.74	0.00
95th-Percentile Queue Length [ft/ln]		113.68	229.96	187.66	2.60	143.41	0.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	16.65	0.00	21.98	0.00	11.28	6.39	0.00	9.27	0.00
Movement LOS				B		C		B	A		A	A
d_A, Approach Delay [s/veh]	0.00			19.12			11.25			9.27		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.32											
Intersection LOS	B											
Intersection V/C	0.677											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.337	0.000	0.000
Crosswalk LOS	F	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	0	1098	632	632
d_b, Bicycle Delay [s]	30.05	6.11	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	4.132	1.560	2.610	2.327
Bicycle LOS	D	A	B	B

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: I-15 NB Ramps (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.732

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	0	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No						No			No		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	245	7	849	0	0	0	0	2024	248	0	1682	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	0	0	0	0	0	13	9	0	9	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	254	7	849	0	0	0	0	2037	9	0	1691	573
Peak Hour Factor	0.9500	0.9500	0.9500	0.9600	0.9600	0.9600	0.9600	0.9500	0.9500	0.9600	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	2	223	0	0	0	0	536	2	0	445	151
Total Analysis Volume [veh/h]	267	7	894	0	0	0	0	2144	9	0	1780	603
Presence of On-Street Parking	No		No				No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Split	Split	Split	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	8	0	0	0	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	0	0	0	10	0	0	10	0
Maximum Green [s]	0	130	0	0	0	0	0	130	0	0	130	0
Amber [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	37	0	0	0	0	0	23	0	0	23	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	0	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	0	0	0	14	0	0	3	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No						No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall		No						No			No	
Maximum Recall		No						No			No	
Pedestrian Recall		No						No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R		C	R	C	R
C, Cycle Length [s]	60	60	60		60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00		4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00		2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	20	20	20		32	32	32	32
g / C, Green / Cycle	0.33	0.33	0.33		0.54	0.54	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.15	0.26	0.27		0.39	0.01	0.33	0.35
s, saturation flow rate [veh/h]	1714	1619	1615		5176	1615	5176	1615
c, Capacity [veh/h]	565	533	532		2783	868	2783	868
d1, Uniform Delay [s]	15.89	18.40	18.42		10.61	6.47	9.55	9.97
k, delay calibration	0.11	0.11	0.11		0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	2.94	2.98		1.76	0.02	1.00	3.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00		1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.80	0.80		0.73	0.01	0.61	0.66
d, Delay for Lane Group [s/veh]	16.45	21.34	21.40		12.37	6.49	10.55	13.96
Lane Group LOS	B	C	C		B	A	B	B
Critical Lane Group	No	No	Yes		Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	2.57	5.28	5.29		4.83	0.04	3.53	4.44
50th-Percentile Queue Length [ft/ln]	64.30	132.05	132.29		120.79	1.02	88.28	110.91
95th-Percentile Queue Length [veh/ln]	4.63	9.05	9.06		8.44	0.07	6.36	7.89
95th-Percentile Queue Length [ft/ln]	115.74	226.28	226.61		210.91	1.83	158.91	197.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.45	21.34	21.37	0.00	0.00	0.00	0.00	12.37	6.49	0.00	10.55	13.96
Movement LOS	B	C	C					B	A		B	B
d_A, Approach Delay [s/veh]	20.25			0.00			12.34			11.42		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	13.57											
Intersection LOS	B											
Intersection V/C	0.732											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersection	2.385	1.970	0.000	0.000
Crosswalk LOS	B	A	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1098	0	632	632
d_b, Bicycle Delay [s]	6.11	30.05	14.05	14.05
l_b,int, Bicycle LOS Score for Intersection	3.391	4.132	2.685	2.805
Bicycle LOS	C	D	B	C

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 6: Project West Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.000

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	1	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0
Total Analysis Volume [veh/h]	0	0	0	0	1	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.50	8.30	7.20	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.40		3.60		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: Project Central Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.015

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	0	0	0	0	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	0	0	0	1	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	0	0	0	3
Total Analysis Volume [veh/h]	16	0	0	0	1	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.58	8.38	7.22	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.12	1.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.58		3.61		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 8: Project East Dwy (NS) at Palmetto Wy (EW)

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.035

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	0	1	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	34	0	0	16	12	21
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	0	0	16	13	21
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	0	0	4	3	6
Total Analysis Volume [veh/h]	36	0	0	17	14	22
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.82	8.53	7.26	0.00	0.00	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.70	2.70	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.82		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.57					
Intersection LOS	A					

Amargosa / Palmetto High-Cube Warehouse

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Scenario 6 General Plan Buildout With Project AM Peak Hour - With Improvements

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8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	NB Left	0.584	26.4	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.584

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	5	23	107	436	73	60	74	1019	9	212	916	323
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	22	0	0	2	0	0	0	0	51
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	23	107	458	73	60	76	1019	9	212	916	374
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	6	28	121	19	16	20	268	2	56	241	98
Total Analysis Volume [veh/h]	5	24	113	482	77	63	80	1073	9	223	964	394
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	130	130	0	130	130	0	130	130	0	130	130	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	30	0	19	35	0	14	23	0	18	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	10	10	15	23	9	37	37	13	41	41
g / C, Green / Cycle	0.01	0.11	0.11	0.17	0.26	0.10	0.41	0.41	0.14	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.00	0.01	0.07	0.15	0.08	0.04	0.20	0.01	0.12	0.25	0.25
s, saturation flow rate [veh/h]	1714	1900	1615	3144	1760	1714	5176	1615	1714	3618	1631
c, Capacity [veh/h]	24	204	173	522	456	164	2097	654	248	1643	741
d1, Uniform Delay [s]	43.98	36.40	38.52	36.73	26.79	38.62	19.88	16.05	37.68	17.83	17.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.25	0.24	3.63	5.22	0.35	2.05	0.81	0.04	9.02	1.29	2.86
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.11	0.62	0.88	0.29	0.46	0.49	0.01	0.86	0.54	0.54
d, Delay for Lane Group [s/veh]	48.23	36.65	42.14	41.95	27.14	40.67	20.69	16.09	46.70	19.12	20.68
Lane Group LOS	D	D	D	D	C	D	C	B	D	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.14	0.47	2.41	5.20	2.30	1.59	4.84	0.11	4.89	6.10	5.83
50th-Percentile Queue Length [ft/ln]	3.44	11.68	60.13	130.09	57.45	39.83	121.01	2.68	122.19	152.51	145.64
95th-Percentile Queue Length [veh/ln]	0.25	0.84	4.33	8.94	4.14	2.87	8.45	0.19	8.51	10.15	9.78
95th-Percentile Queue Length [ft/ln]	6.20	21.02	108.23	223.62	103.41	71.69	211.21	4.82	212.83	253.78	244.60

Movement, Approach, & Intersection Results

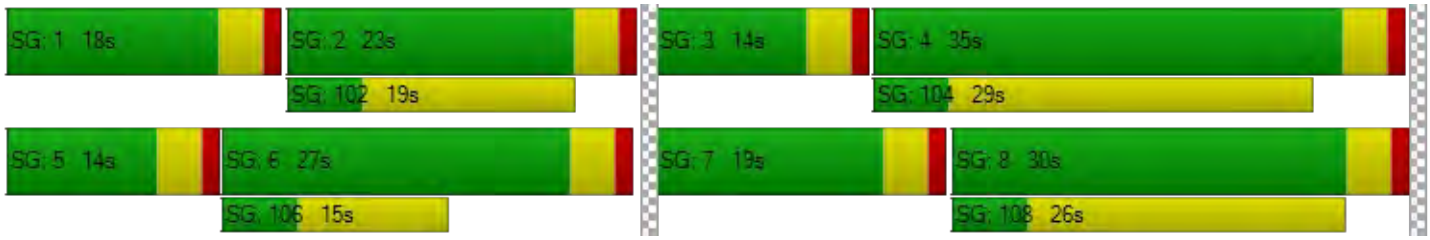
d_M, Delay for Movement [s/veh]	48.23	36.65	42.14	41.95	27.14	27.14	40.67	20.69	16.09	46.70	19.16	20.68
Movement LOS	D	D	D	D	C	C	D	C	B	D	B	C
d_A, Approach Delay [s/veh]	41.43			38.61			22.03			23.43		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	26.39											
Intersection LOS	C											
Intersection V/C	0.584											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.50	36.50	36.50	36.50
l_p,int, Pedestrian LOS Score for Intersection	2.237	2.392	3.151	3.312
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	577	688	422	510
d_b, Bicycle Delay [s]	22.81	19.39	28.06	24.99
l_b,int, Bicycle LOS Score for Intersection	1.782	2.535	2.167	2.386
Bicycle LOS	A	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Amargosa / Palmetto High-Cube Warehouse

Vistro File: C:\...\PME.vistro

Scenario 6 General Plan Buildout With Project PM Peak Hour - With Improvements

Report File: C:\...\PM40WI.pdf

8/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
3	Key Pointe Dr (NS) at Main St (EW)	Signalized	HCM 7th Edition	SB Left	0.848	50.1	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 3: Key Pointe Dr (NS) at Main St (EW)

Control Type:	Signalized	Delay (sec / veh):	50.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.848

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	100.00	175.00	100.00	100.00	175.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	34	121	265	551	139	32	143	1274	20	325	1222	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	35	0	1	1	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	34	121	265	586	139	33	144	1274	20	325	1222	560
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	32	70	154	37	9	38	335	5	86	322	147
Total Analysis Volume [veh/h]	36	127	279	617	146	35	152	1341	21	342	1286	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	10	10	0
Maximum Green [s]	30	130	0	30	130	0	130	130	0	130	130	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	30	0	25	41	0	15	29	0	26	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	24	0	0	14	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	L	C	R	L	C	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110	110
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	20	20	21	35	11	31	31	22	42	42
g / C, Green / Cycle	0.06	0.18	0.18	0.19	0.32	0.10	0.28	0.28	0.20	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.06	0.16	0.19	0.10	0.08	0.25	0.01	0.19	0.34	0.35
s, saturation flow rate [veh/h]	1714	1900	1615	3144	1741	1714	5176	1615	1714	3618	1616
c, Capacity [veh/h]	101	351	298	600	551	172	1445	451	343	1372	613
d1, Uniform Delay [s]	49.74	39.10	43.80	44.34	28.58	48.69	37.96	28.98	43.48	32.04	32.54
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.11	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.93	0.58	9.88	19.12	0.32	11.32	8.91	0.19	17.17	10.07	27.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.34	0.89	0.98	0.31	0.84	0.88	0.04	0.95	0.89	0.92
d, Delay for Lane Group [s/veh]	51.67	39.68	53.68	63.46	28.90	60.00	46.88	29.16	60.64	42.11	59.88
Lane Group LOS	D	D	D	E	C	E	D	C	E	D	E
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.95	2.91	7.81	9.46	3.49	4.27	11.47	0.39	9.92	15.89	17.71
50th-Percentile Queue Length [ft/ln]	23.81	72.69	195.30	236.60	87.25	106.76	286.67	9.81	248.11	397.28	442.86
95th-Percentile Queue Length [veh/ln]	1.71	5.23	12.40	14.51	6.28	7.66	17.02	0.71	15.09	22.43	24.62
95th-Percentile Queue Length [ft/ln]	42.86	130.84	309.90	362.73	157.05	191.49	425.50	17.66	377.27	560.73	615.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.67	39.68	53.68	63.46	28.90	28.90	60.00	46.88	29.16	60.64	42.13	59.88
Movement LOS	D	D	D	E	C	C	E	D	C	E	D	E
d_A, Approach Delay [s/veh]	49.48			55.62			47.95			49.70		
Approach LOS	D			E			D			D		
d_I, Intersection Delay [s/veh]	50.10											
Intersection LOS	D											
Intersection V/C	0.848											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	46.41	46.41	46.41	46.41
l_p,int, Pedestrian LOS Score for Intersection	2.363	2.528	3.291	3.588
Crosswalk LOS	B	B	C	D
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	472	672	454	654
d_b, Bicycle Delay [s]	32.11	24.26	32.88	24.93
l_b,int, Bicycle LOS Score for Intersection	2.253	2.810	2.351	2.718
Bicycle LOS	B	C	B	B

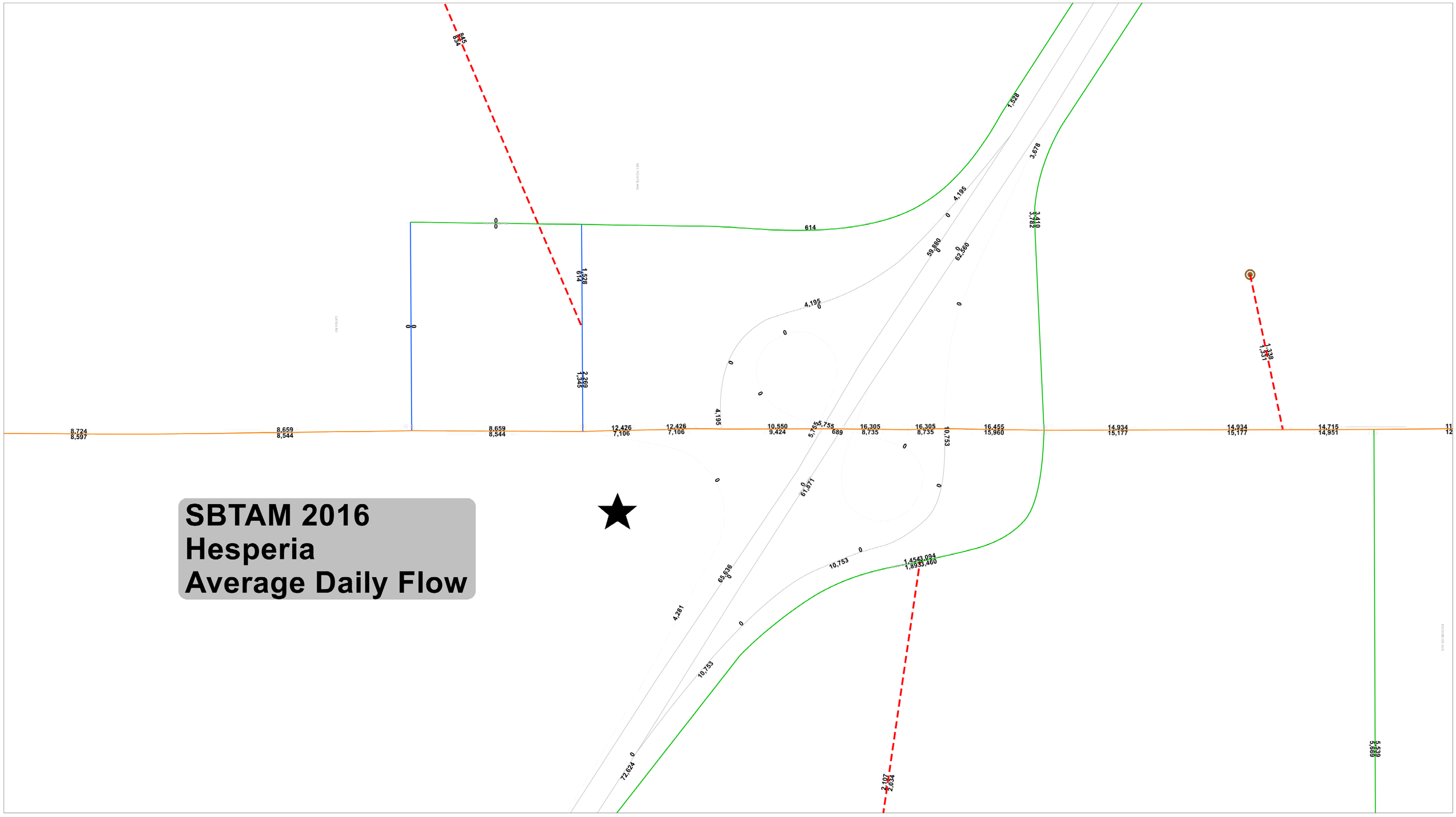
Sequence

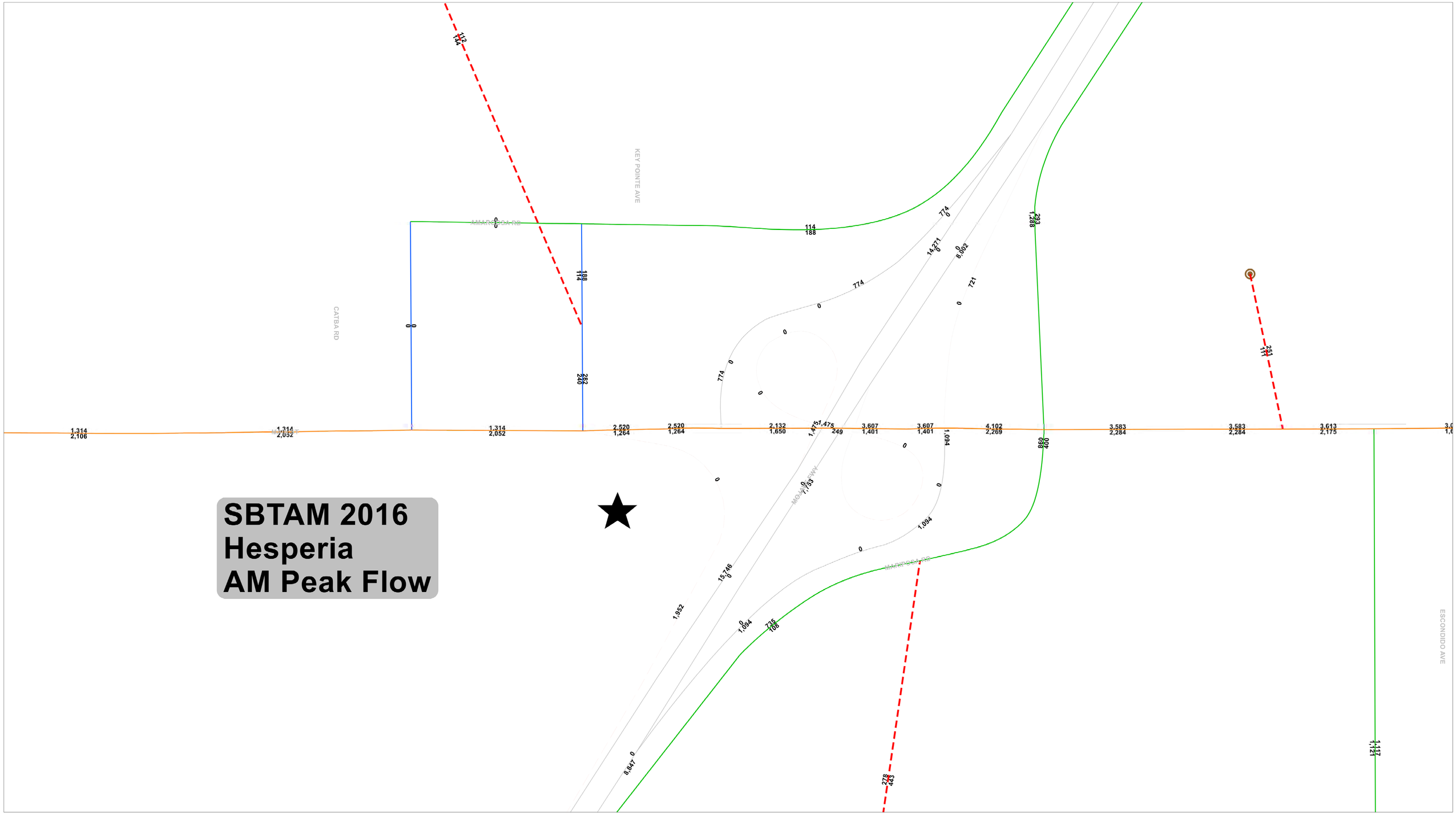
Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

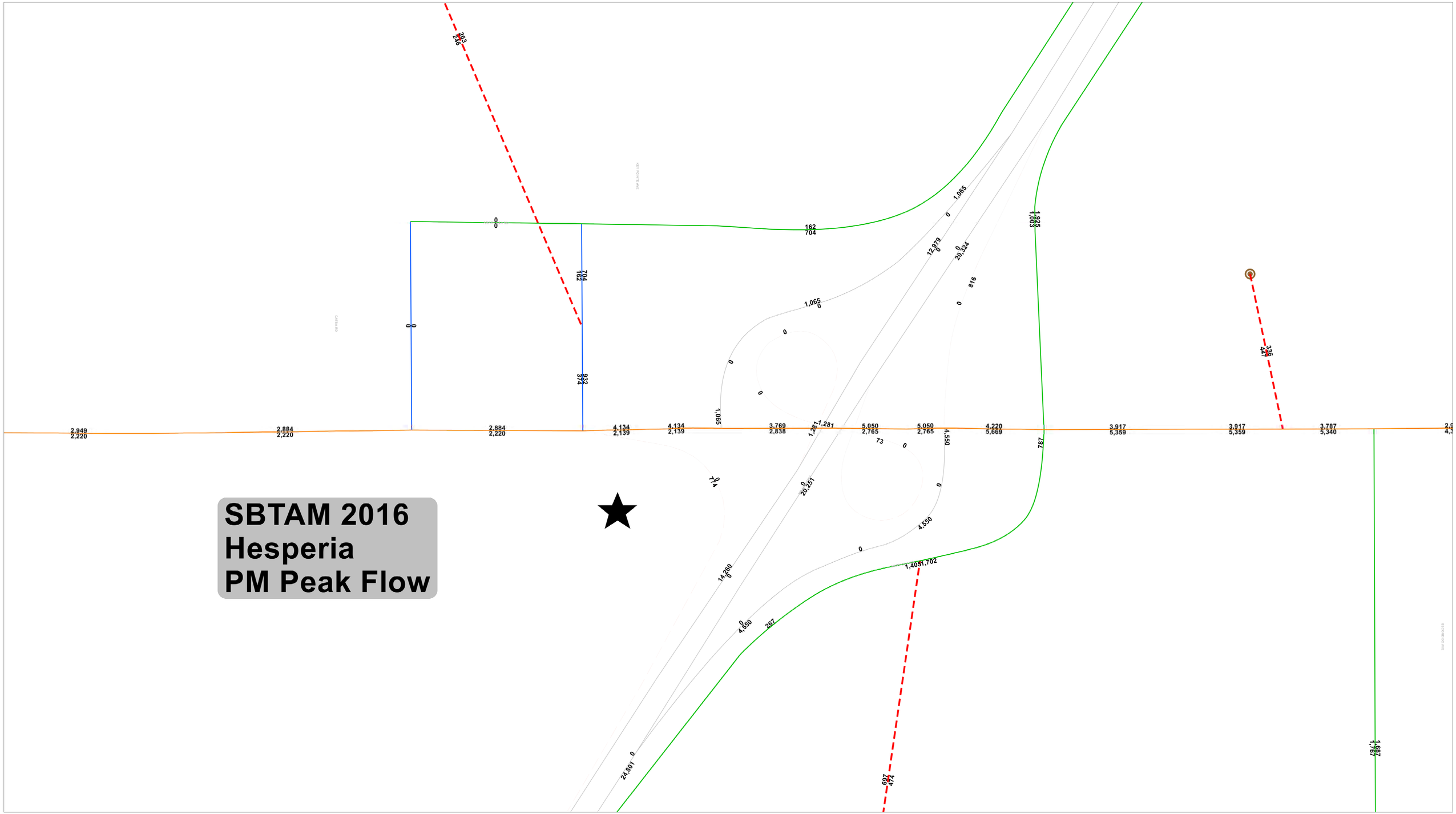


APPENDIX F

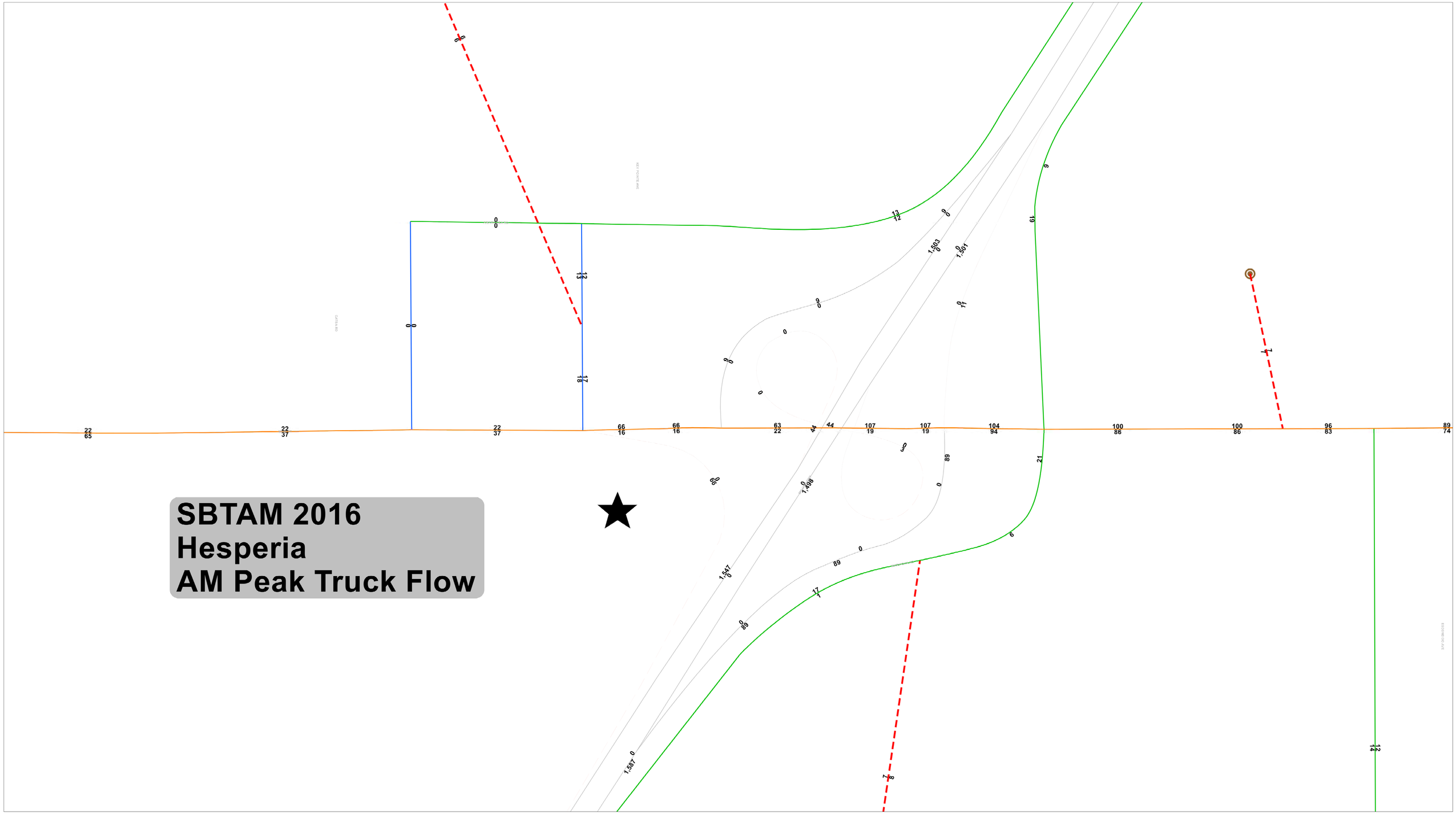
SBTAM MODEL PLOTS

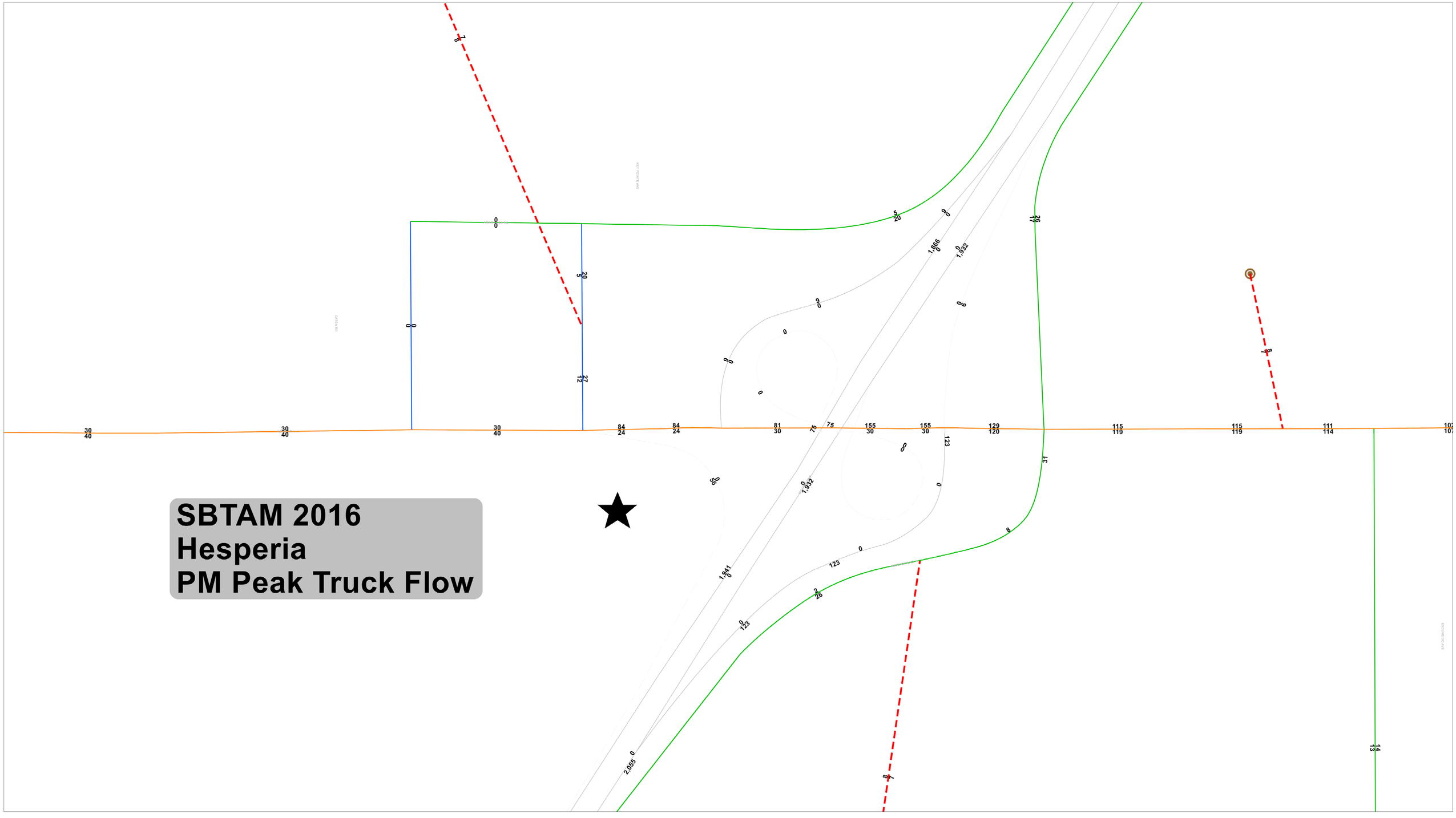

SBTAM 2016
Hesperia
Average Daily Flow

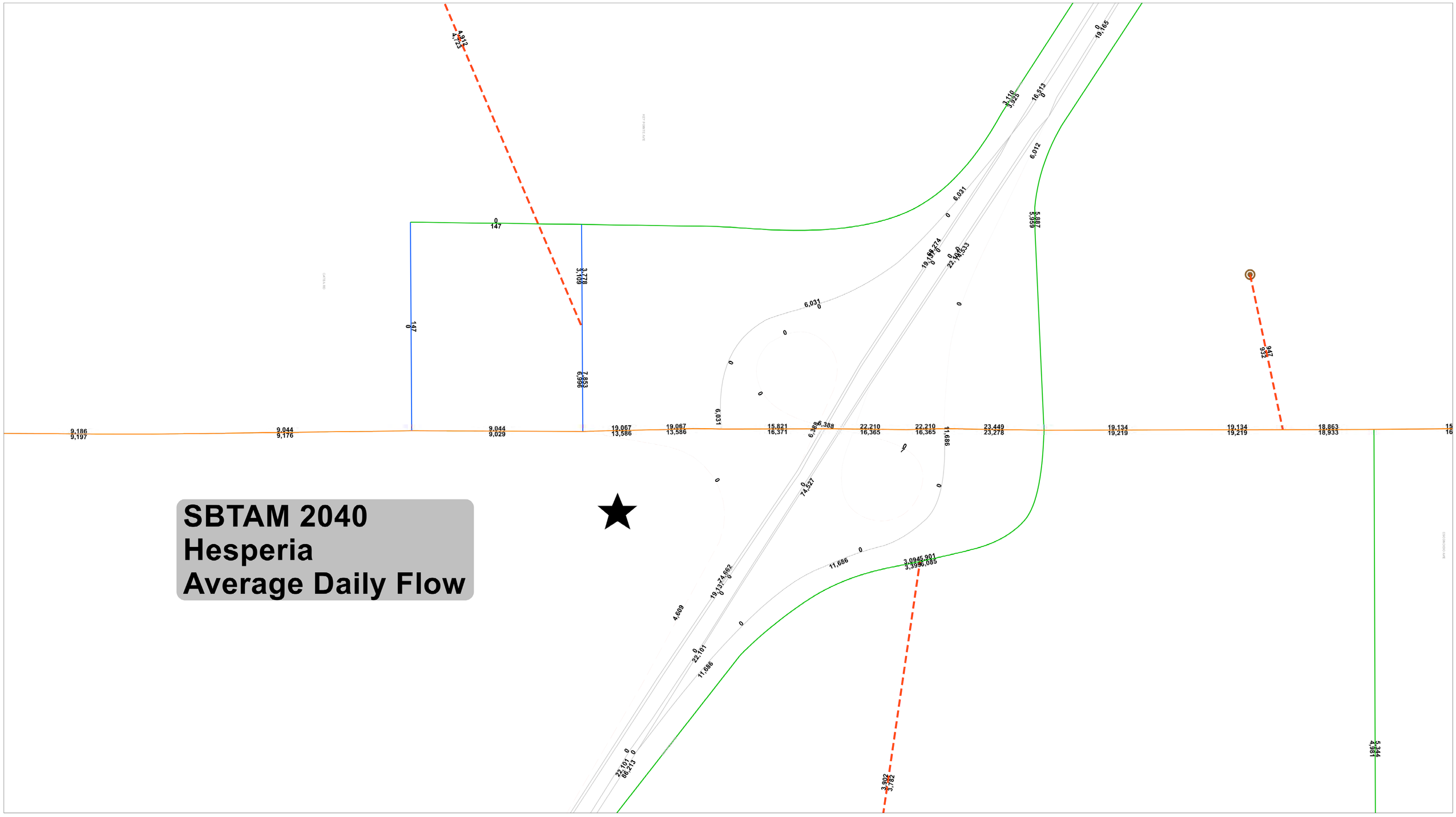

SBTAM 2016
Hesperia
AM Peak Flow
KEY POINTE AVE
CATBA RD
MAXWELL DR
MOJAVE DR
ESCONDIDO AVE
1,314
2,106
1,314
2,032
1,314
2,052
2,520
1,264
2,520
1,264
2,132
1,650
1,475
249
1,475
3,607
1,401
3,607
1,401
4,102
2,269
3,583
2,284
3,583
2,284
3,613
2,175
1,417
1,121
1,094
1,153
15,746
1,952
8,847
774
14,271
8,002
721
1,280
735
108
278
443
240
282
188
114
144
112

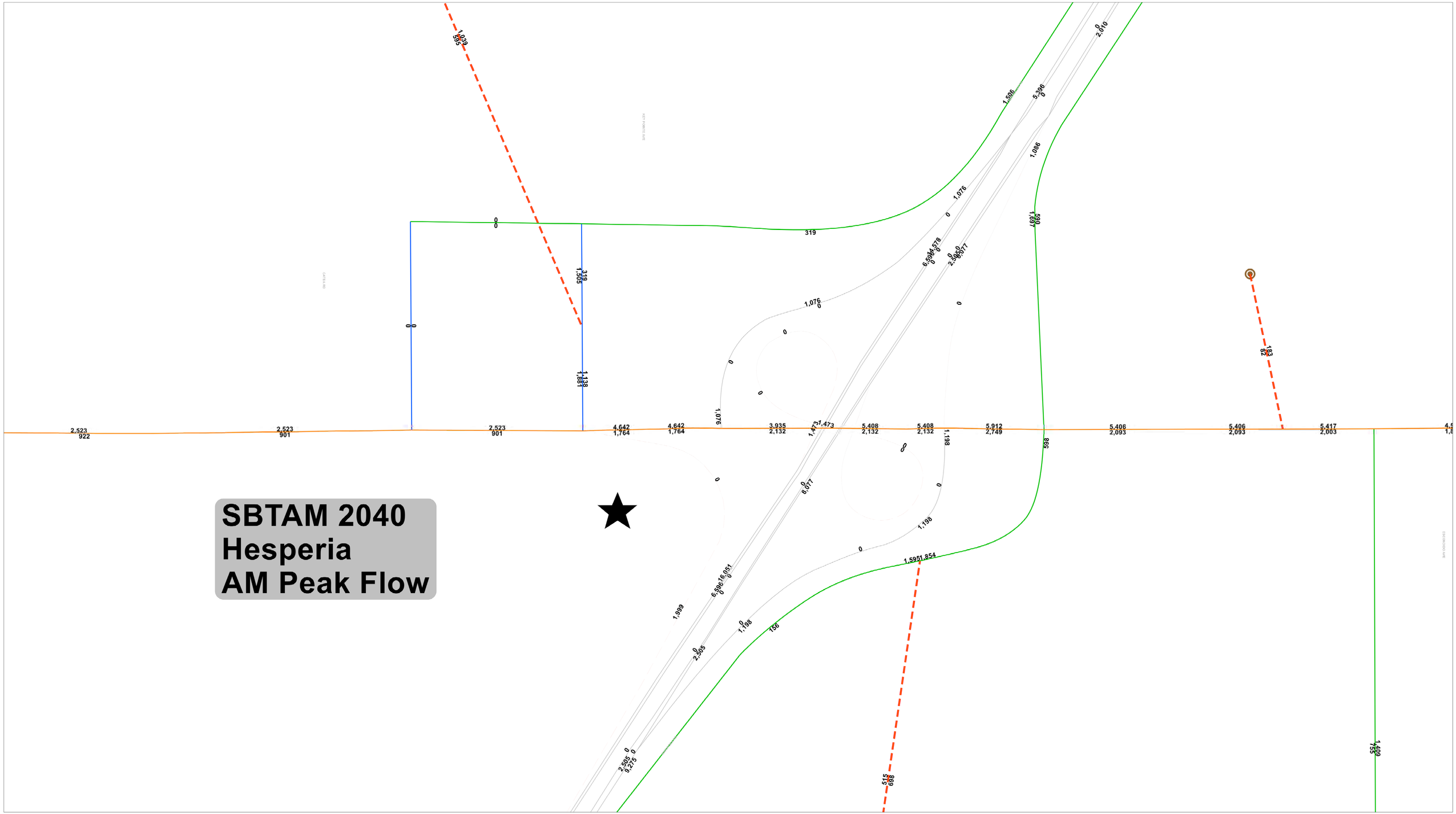

SBTAM 2016
Hesperia
PM Peak Flow

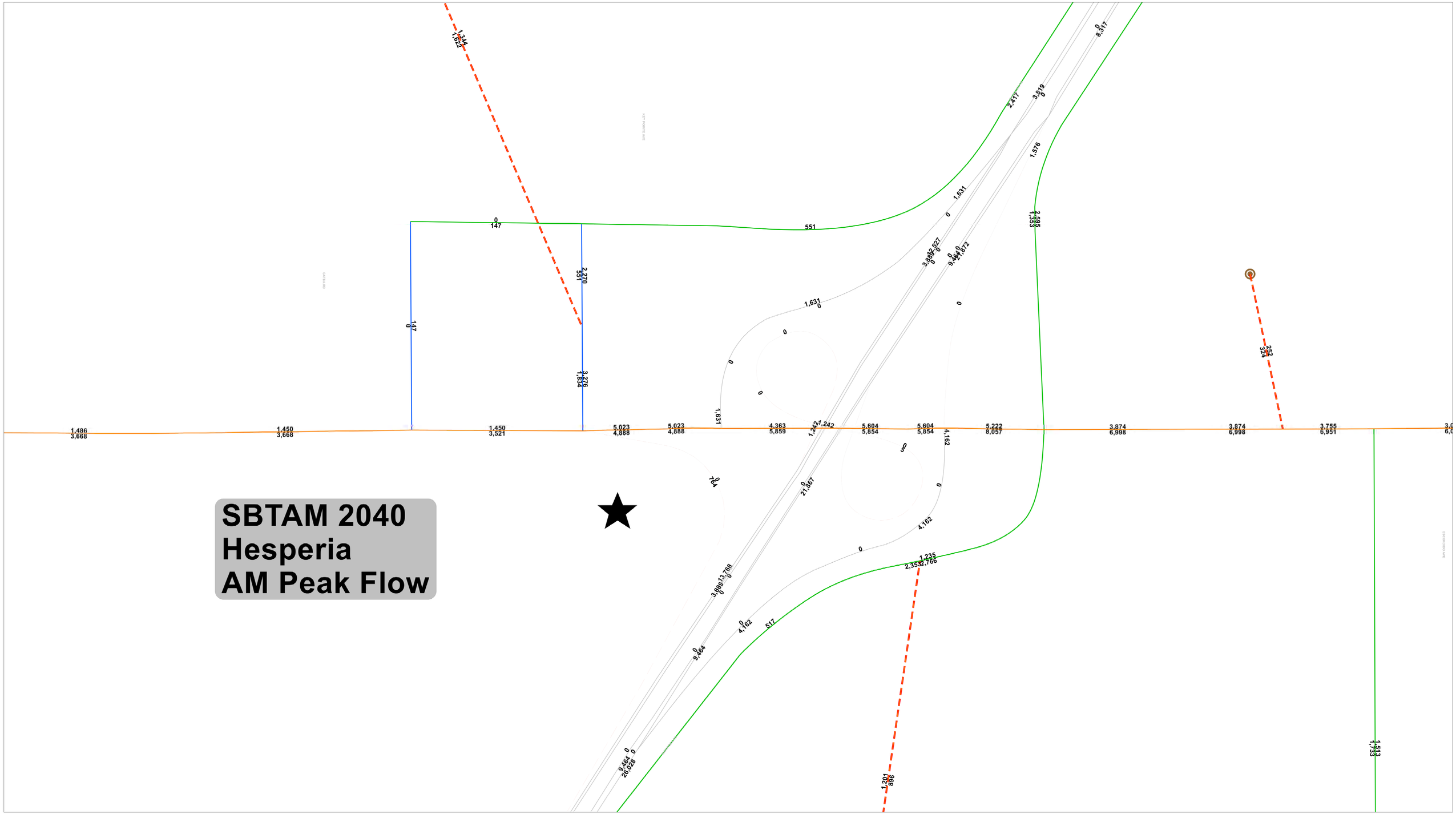
SBTAM 2016
Hesperia
Average Daily Truck Flow

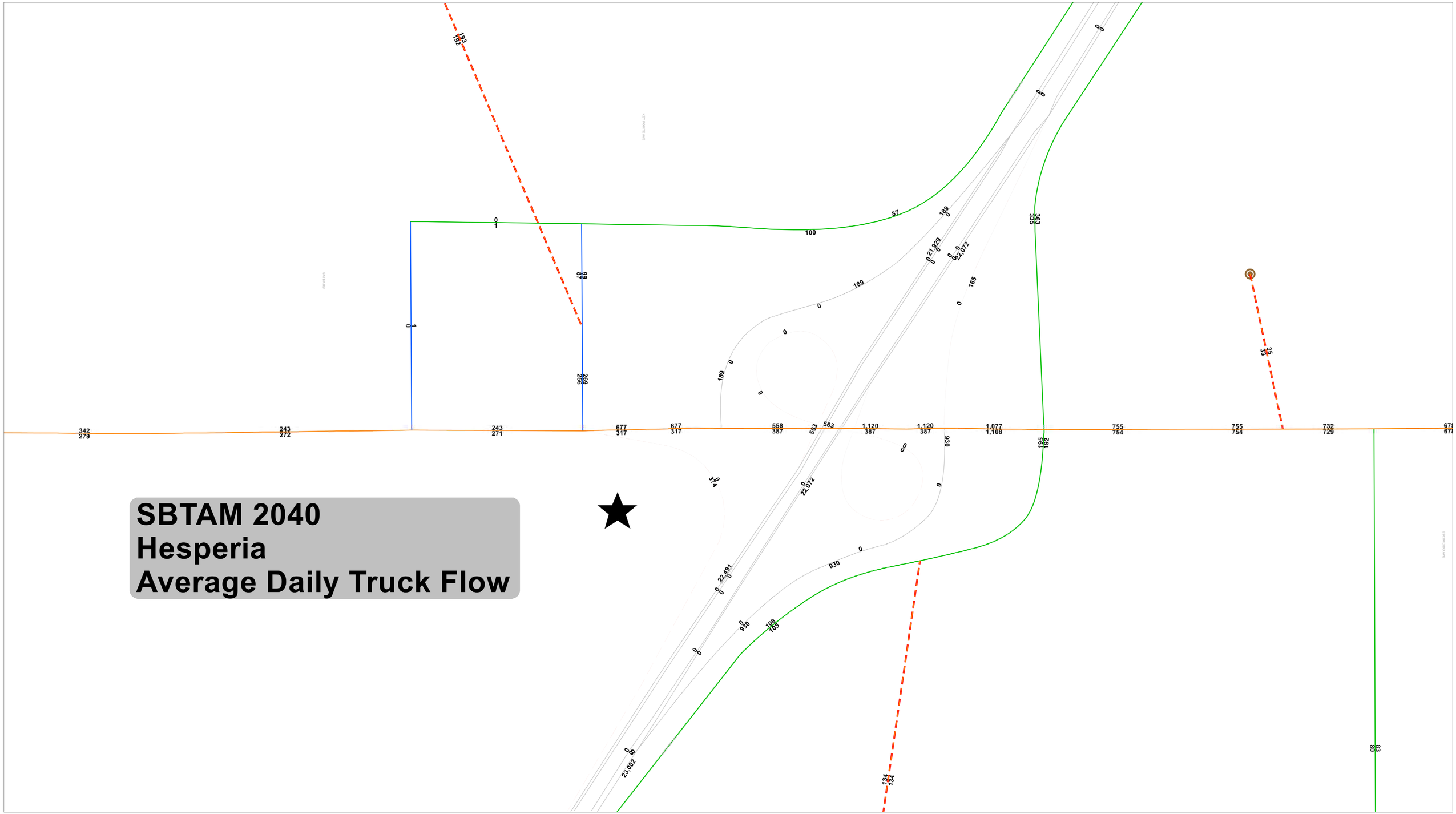

SBTAM 2016
Hesperia
AM Peak Truck Flow

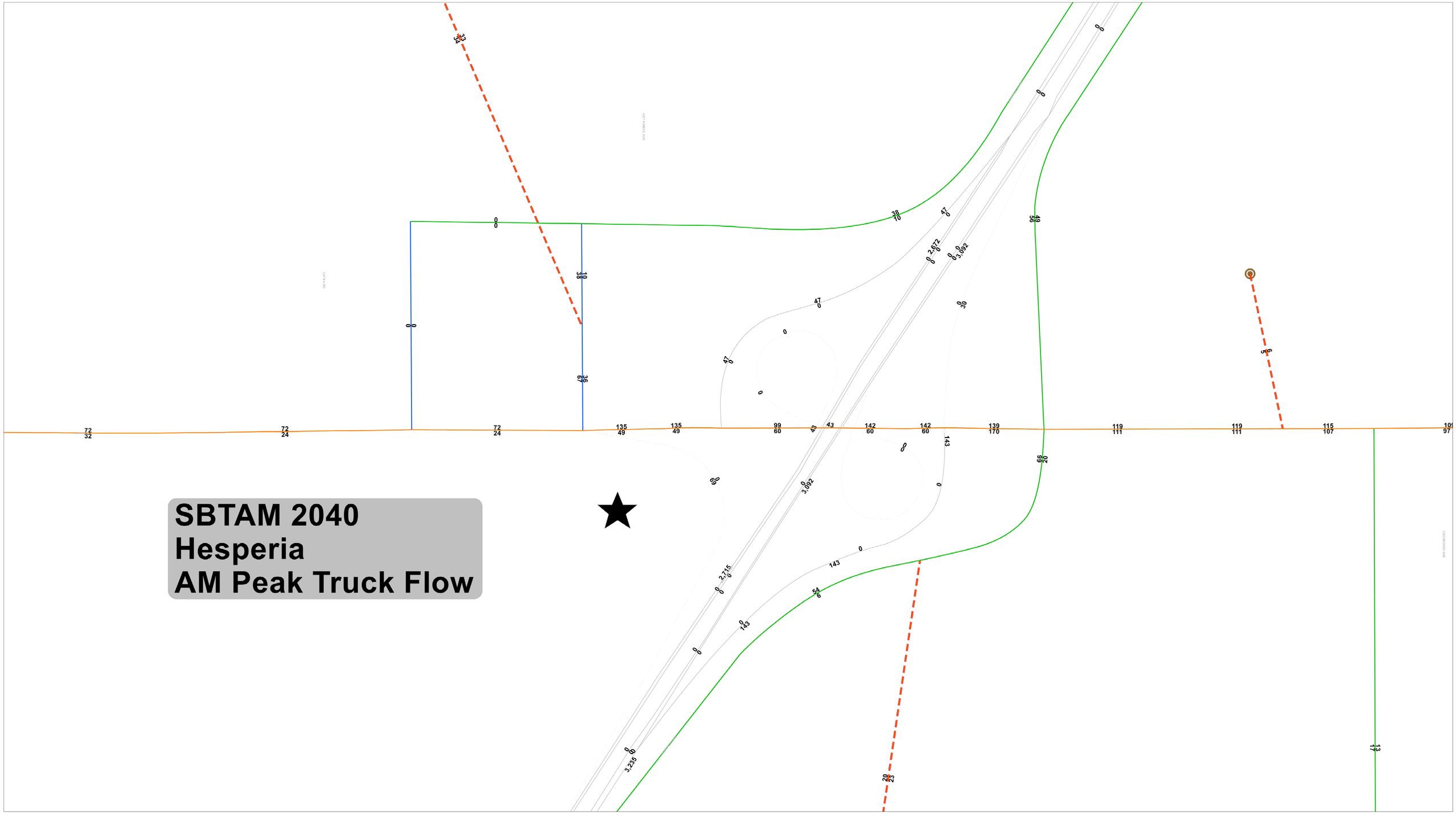

SBTAM 2016
Hesperia
PM Peak Truck Flow


SBTAM 2040
Hesperia
Average Daily Flow

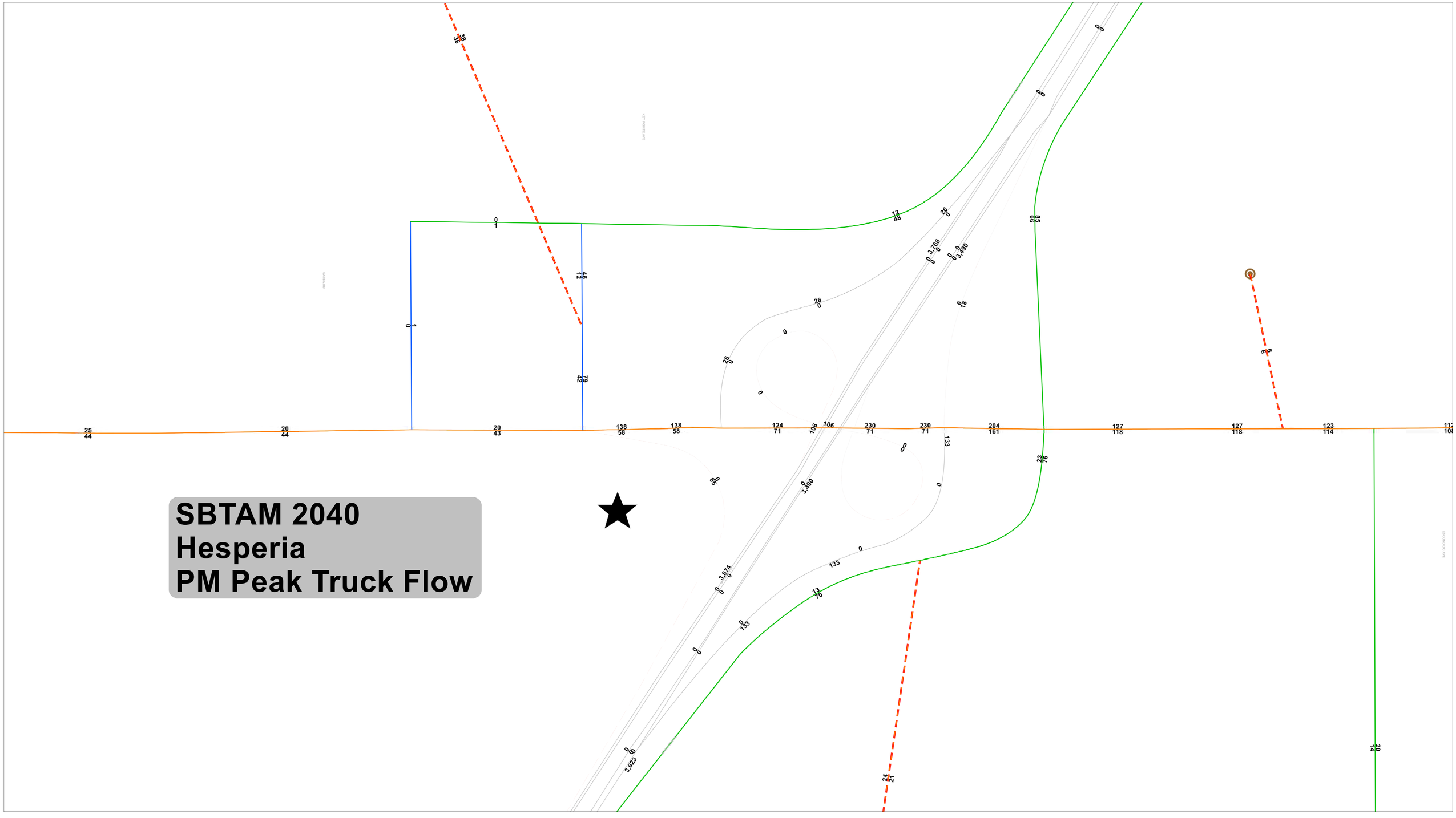

SBTAM 2040
Hesperia
AM Peak Flow


SBTAM 2040
Hesperia
AM Peak Flow


SBTAM 2040
Hesperia
Average Daily Truck Flow


SBTAM 2040
Hesperia
AM Peak Truck Flow

SBTAM 2040
Hesperia
PM Peak Truck Flow



APPENDIX G

POST-PROCESSING WORKSHEETS

INTERSECTION	LEG	CTP 2016 ADT	EXISTING 2022 ADT	CTP 2040 ADT	NEW 2040 ADT[1]	OPENING 2024 ADT
Amargosa Road at Palmetto Way	North	2,244	9,900	7,222	13,600	10,300
	South	2,244	9,900	7,222	13,600	10,300
	East	-	-	-	-	-
	West	-	-	-	-	-
Key Pointe Drive at Amargosa Road	North	-	-	-	-	-
	South	2,244	500	7,073	4,100	900
	East	2,244	7,500	7,222	11,200	7,900
	West	-	7,300	148	8,000	7,400
Key Pointe Drive at Main Street	North	3,774	7,300	15,374	16,000	8,300
	South	-	8,300	-	9,100	8,400
	East	24,616	35,000	38,630	45,500	36,200
	West	17,654	25,200	18,587	27,700	25,500
I-15 SB Ramps at Main Street	North	10,408	13,900	13,171	16,000	14,100
	South	-	-	-	-	-
	East	26,653	40,900	40,088	51,000	42,000
	West	20,058	35,100	33,647	45,300	36,200
I-15 NB Ramps at Main Street	North	3,744	4,700	6,177	6,500	4,900
	South	11,431	13,700	12,616	15,100	13,900
	East	33,711	47,800	48,912	59,200	49,100
	West	25,953	39,000	40,082	49,600	40,200

(1) Adjusted for minimum 10% growth over existing average daily traffic volumes for year 2040.

Amargosa Road (NS) / Palmetto Way (EW) - #1

MORNING PEAK HOUR	EVENING PEAK HOUR
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):	EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):
2022	2022
0 188 0	0 409 0
< v >	< v >
0 ^ ^ 0	0 ^ ^ 0
0 > < 0	0 > < 0
0 v v 0	0 v v 0
< ^ >	< ^ >
0 178 0	1 429 0
EXISTING PEAK HOUR COUNT YEAR (AUTOS):	EXISTING PEAK HOUR COUNT YEAR (AUTOS):
2022	2022
188 178	409 429
v ^	v ^
0 < IN = 366 < 0	1 < IN = 839 < 0
0 > OUT = 366 > 0	0 > OUT = 839 > 0
v ^	v ^
188 178	409 430
EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):	EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):
0 20 0	0 8 0
< v >	< v >
0 ^ ^ 0	0 ^ ^ 0
0 > < 0	0 > < 0
0 v v 0	0 v v 0
PCE FACTORS BY AXLE: < ^ >	PCE FACTORS BY AXLE: < ^ >
2: 1.5 3: 2.0 4+: 3.0 0 18 0	2: 1.5 3: 2 4+: 3.0 0 14 0
TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):	TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):
2022	2022
0 208 0	0 417 0
< v >	< v >
0 ^ ^ 0	0 ^ ^ 0
0 > < 0	0 > < 0
0 v v 0	0 v v 0
< ^ >	< ^ >
0 196 0	1 443 0
EXISTING PEAK PERIOD MODEL YEAR (AUTO):	EXISTING PEAK PERIOD MODEL YEAR (AUTO):
2016	2016
114 188	162 704
v ^	v ^
0 < IN = 302 < 0	0 < IN = 866 < 0
0 > OUT = 302 > 0	0 > OUT = 866 > 0
v ^	v ^
114 188	162 704
EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):	EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):
2016	2016
13 12	5 20
v ^	v ^
0 < IN = 25 < 0	0 < IN = 25 < 0
0 > OUT = 25 > 0	0 > OUT = 25 > 0
v ^	v ^
13 12	5 20
EXISTING PEAK HOUR MODEL YEAR (PCEs):	EXISTING PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 0.38	PHF FOR CARS: 0.28
PHF FOR TRUCKS: 0.333	PHF FOR TRUCKS: 0.25
48 75	47 202
v ^	v ^
0 < IN = 123 < 0	0 < IN = 249 < 0
0 > OUT = 123 > 0	0 > OUT = 249 > 0
v ^	v ^
48 75	47 202
FUTURE PEAK PERIOD MODEL YEAR (AUTO):	FUTURE PEAK PERIOD MODEL YEAR (AUTO):
2040	2040
1506 319	551 2417
v ^	v ^
0 < IN = 1825 < 0	0 < IN = 2968 < 0
0 > OUT = 1825 > 0	0 > OUT = 2968 > 0
v ^	v ^
1506 319	551 2417
FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):	FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):
2040	2040
38 10	12 48
v ^	v ^
0 < IN = 48 < 0	0 < IN = 60 < 0
0 > OUT = 48 > 0	0 > OUT = 60 > 0
v ^	v ^
38 10	12 48
FUTURE PEAK HOUR MODEL YEAR (PCEs):	FUTURE PEAK HOUR MODEL YEAR (PCEs):
PHF FOR CARS: 0.38	PHF FOR CARS: 0.28
PHF FOR TRUCKS: 0.333	PHF FOR TRUCKS: 0.25
585 125	157 689
v ^	v ^
0 < IN = 709 < 0	0 < IN = 846 < 0
0 > OUT = 709 > 0	0 > OUT = 846 > 0
v ^	v ^
585 125	157 689
RAW GROWTH (PCEs): 2016 TO 2040	RAW GROWTH (PCEs): 2016 TO 2040
CONVERSION OF TRUCKS TO: 2040	CONVERSION OF TRUCKS TO: 2040
537 49	111 487
FACTOR = 1.00 v ^	FACTOR = 1.00 v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
537 49	111 487

Amargosa Road (NS) / Palmetto Way (EW) - #1

MORNING PEAK HOUR	EVENING PEAK HOUR
ADJUSTED GROWTH (PCEs): 2016 TO 2040	ADJUSTED GROWTH (PCEs): 2016 TO 2040
10.00 MINIMUM GROWTH %	10 MINIMUM GROWTH %
540 50	110 490
v ^	v ^
0 < IN = 590 < 0	0 < IN = 600 < 0
0 > OUT = 590 > 0	0 > OUT = 600 > 0
v ^	v ^
540 50	110 490
PRORATED GROWTH (PCEs): 2022 TO 2040	PRORATED GROWTH (PCEs): 2022 TO 2040
18 YEARS	18 YEARS
410 40	80 370
v ^	v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
410 40	80 370
NEW PROJECTED VOLUMES (PCEs): 2040	NEW PROJECTED VOLUMES (PCEs): 2040
620 240	500 810
v ^	v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
620 240	500 810
YEAR 2024 GROWTH: 2022 TO 2024	YEAR 2024 GROWTH: 2022 TO 2024
2 YEARS	2 YEARS
50 0	10 40
v ^	v ^
0 < < 0	0 < < 0
0 > > 0	0 > > 0
v ^	v ^
50 0	10 40
INITIAL YEAR 2024 VOLUMES:	INITIAL YEAR 2024 VOLUMES:
2024	2024
260 200	430 480
v ^	v ^
0 < IN = 460 < 0	0 < IN = 910 < 0
0 > OUT = 460 > 0	0 > OUT = 910 > 0
v ^	v ^
260 200	430 480
BALANCED YEAR 2024 VOLUMES:	BALANCED YEAR 2024 VOLUMES:
2024	2024
260 200	430 480
v ^	v ^
0 < IN = 460 < 0	0 < IN = 910 < 0
0 > OUT = 460 > 0	0 > OUT = 910 > 0
v ^	v ^
260 200	430 480
ADT BY LEG:	ADT BY LEG:
2040	2040
13,600	13,600
N	N
0 W LEG E 0	0 W LEG E 0
S	S
13,600	13,600
ADT BY LEG:	ADT BY LEG:
2024	2024
10,300	10,300
N	N
0 W LEG E 0	0 W LEG E 0
S	S
10,300	10,300

Amargosa Road (NS) / Palmetto Way (EW) - #1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**1**	SOUTH LEG	
BOUND	THRU	**196**	IN ...	**240**	BOUND	THRU	**443**	IN ...	**810**
	RIGHT	**0**	OUT ...	**620**		RIGHT	**0**	OUT ...	**500**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**208**	IN ...	**620**	BOUND	THRU	**417**	IN ...	**500**
	RIGHT	**0**	OUT ...	**240**		RIGHT	**0**	OUT ...	**810**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**1**	**1**	NORTH LEG
BOUND	THRU	**196**	**240**	RATIO **6.3%**	BOUND	THRU	**443**	**810**	RATIO **9.6%**
	RIGHT	**0**	**0**	ADT 13,600		RIGHT	**0**	**0**	ADT 13,600
SOUTH	LEFT	**0**	**0**	SOUTH LEG	SOUTH	LEFT	**0**	**0**	SOUTH LEG
BOUND	THRU	**208**	**620**	RATIO **6.3%**	BOUND	THRU	**417**	**500**	RATIO **9.6%**
	RIGHT	**0**	**0**	ADT 13,600		RIGHT	**0**	**0**	ADT 13,600
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**
	RIGHT	**0**	**0**	ADT 0		RIGHT	**0**	**0**	ADT 0
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**
	RIGHT	**0**	**0**	ADT 0		RIGHT	**0**	**0**	ADT 0

Key Pointe Drive (NS) / Amargosa Road (EW) - #2

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	145	>				<	122	
	1	v				v	7	
			<	^	>			
			0	0	5			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	0			
				v	^			
	122	<	IN =	280	<	129		
	146	>	OUT =	280	>	150		
				v	^			
				8	5			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
	0	^				^	0	
	18	>				<	18	
	0	v				v	0	
			<	^	>			
			0	0	0			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	163	>				<	140	
	1	v				v	7	
			<	^	>			
			0	0	5			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	0			
				v	^			
	0	<	IN =	302	<	114		
	0	>	OUT =	302	>	188		
				v	^			
				114	188			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	0			
				v	^			
	0	<	IN =	25	<	13		
	0	>	OUT =	25	>	12		
				v	^			
				13	12			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	0			
				v	^			
	0	<	IN =	123	<	48		
	0	>	OUT =	123	>	75		
				v	^			
				48	75			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	0			
				v	^			
	0	<	IN =	1825	<	1506		
	0	>	OUT =	1824	>	319		
				v	^			
				1505	319			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	0			
				v	^			
	0	<	IN =	48	<	38		
	0	>	OUT =	48	>	10		
				v	^			
				38	10			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	0			
				v	^			
	0	<	IN =	709	<	585		
	0	>	OUT =	709	>	125		
				v	^			
				585	125			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	0			
				v	^			
	0	<			<	537		
	0	>			>	49		
				v	^			
				537	49			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	262	>				<	309	
	9	v				v	9	
			<	^	>			
			1	0	11			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	0			
				v	^			
	310	<	IN =	601	<	318		
	271	>	OUT =	601	>	273		
				v	^			
				18	12			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
	0	^				^	0	
	25	>				<	26	
	0	v				v	3	
			<	^	>			
			2	0	8			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
	0	^				^	0	
	287	>				<	335	
	9	v				v	12	
			<	^	>			
			3	0	19			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	0			
				v	^			
	0	<	IN =	866	<	162		
	0	>	OUT =	866	>	704		
				v	^			
				162	704			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	0			
				v	^			
	0	<	IN =	25	<	5		
	0	>	OUT =	25	>	20		
				v	^			
				5	20			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	0			
				v	^			
	0	<	IN =	249	<	47		
	0	>	OUT =	249	>	202		
				v	^			
				47	202			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	0			
				v	^			
	0	<	IN =	2968	<	551		
	147	>	OUT =	2968	>	2417		
				v	^			
				551	2270			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	0			
				v	^			
	0	<	IN =	59	<	12		
	1	>	OUT =	60	>	48		
				v	^			
				12	46			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	0			
				v	^			
	0	<	IN =	846	<	157		
	41	>	OUT =	846	>	689		
				v	^			
				157	647			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	0			
				v	^			
	0	<			<	111		
	41	>			>	487		
				v	^			
				111	445			

Key Pointe Drive (NS) / Amargosa Road (EW) - #2

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					0	0				10 MINIMUM GROWTH %					0	0			
					v	^									v	^			
			10	<	IN =	610	<	540					30	<	IN =	590	<	110	
			20	>	OUT =	600	>	50					40	>	OUT =	630	>	490	
					v	^									v	^			
					540	50									110	440			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					0	0				18 YEARS					0	0			
					v	^									v	^			
			10	<			<	410					20	<			<	80	
			20	>			>	40					30	>			>	370	
					v	^									v	^			
					410	40									80	330			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					0	0									0	0			
					v	^									v	^			
			150	<			<	560					360	<			<	430	
			180	>			>	210					330	>			>	680	
					v	^									v	^			
					420	50									100	350			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					0	0				2 YEARS					0	0			
					v	^									v	^			
			0	<			<	50					0	<			<	10	
			0	>			>	0					0	>			>	40	
					v	^									v	^			
					50	0									10	40			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					0	0				2024					0	0			
					v	^									v	^			
			140	<	IN =	370	<	200					340	<	IN =	720	<	360	
			160	>	OUT =	370	>	170					300	>	OUT =	720	>	350	
					v	^									v	^			
					60	10									30	60			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					0	0				2024					0	0			
					v	^									v	^			
			140	<	IN =	370	<	200					340	<	IN =	720	<	360	
			160	>	OUT =	370	>	170					300	>	OUT =	720	>	350	
					v	^									v	^			
					60	10									30	60			
ADT BY LEG:										ADT BY LEG:									
2040					0					2040					0				
					N										N				
			8,000	W	LEG	E		11,200					8,000	W	LEG	E		11,200	
					S										S				
					4,100										4,100				
ADT BY LEG:										ADT BY LEG:									
2024					0					2024					0				
					N										N				
			7,400	W	LEG	E		7,900					7,400	W	LEG	E		7,900	
					S										S				
					900										900				

Key Pointe Drive (NS) / Amargosa Road (EW) - #2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**3**	SOUTH LEG	
BOUND	THRU	**0**	IN ...	**50**	BOUND	THRU	**0**	IN ...	**350**
	RIGHT	**5**	OUT ...	**420**		RIGHT	**19**	OUT ...	**100**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**0**		RIGHT	**0**	OUT ...	**0**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**163**	IN ...	**180**	BOUND	THRU	**287**	IN ...	**330**
	RIGHT	**1**	OUT ...	**150**		RIGHT	**9**	OUT ...	**360**
WEST	LEFT	**7**	EAST LEG		WEST	LEFT	**12**	EAST LEG	
BOUND	THRU	**140**	IN ...	**560**	BOUND	THRU	**335**	IN ...	**430**
	RIGHT	**0**	OUT ...	**210**		RIGHT	**0**	OUT ...	**680**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG		NORTH	LEFT	**3**	**18**	NORTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**-**	BOUND	THRU	**0**	**0**	RATIO	**-**
	RIGHT	**5**	**49**	ADT	0		RIGHT	**19**	**352**	ADT	0
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**11.4%**	BOUND	THRU	**0**	**0**	RATIO	**11.5%**
	RIGHT	**0**	**0**	ADT	4,100		RIGHT	**0**	**0**	ADT	4,100
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**163**	**179**	RATIO	**7.0%**	BOUND	THRU	**287**	**328**	RATIO	**10.1%**
	RIGHT	**1**	**17**	ADT	11,200		RIGHT	**9**	**21**	ADT	11,200
WEST	LEFT	**7**	**403**	WEST LEG		WEST	LEFT	**12**	**79**	WEST LEG	
BOUND	THRU	**140**	**154**	RATIO	**4.4%**	BOUND	THRU	**335**	**369**	RATIO	**9.2%**
	RIGHT	**0**	**0**	ADT	8,000		RIGHT	**0**	**0**	ADT	8,000

Key Pointe Drive (NS) / Main Street (EW) - #3

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022			8	26	114			
			<	v	>			
	19	^				^	115	
	752	>				<	477	
	8	v				v	184	
			<	^	>			
			4	12	91			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022				148	146			
				v	^			
	489	<	IN =	1810		<	776	
	779	>	OUT =	1810		>	957	
				v	^			
				218	107			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			3	0	23			
			<	v	>			
	11	^				^	17	
	174	>				<	130	
	0	v				v	9	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2.0 4+: 3.0			0	0	6			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022			11	26	137			
			<	v	>			
	30	^				^	132	
	926	>				<	607	
	8	v				v	193	
			<	^	>			
			4	12	97			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016				240	282			
				v	^			
	1314	<	IN =	4812		<	2520	
	2052	>	OUT =	4812		>	3216	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016				18	17			
				v	^			
	22	<	IN =	121		<	66	
	37	>	OUT =	121		>	82	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.38			97	113			
PHF FOR TRUCKS:	0.333			v	^			
	507	<	IN =	1869		<	980	
	792	>	OUT =	1869		>	1249	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040				1881	1138			
				v	^			
	2523	<	IN =	7424		<	4642	
	901	>	OUT =	7424		>	3763	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040				67	36			
				v	^			
	72	<	IN =	226		<	135	
	24	>	OUT =	226		>	118	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.38			737	444			
PHF FOR TRUCKS:	0.333			v	^			
	983	<	IN =	2896		<	1809	
	350	>	OUT =	2896		>	1469	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO:	2040			640	332			
FACTOR =	1.00			v	^			
	476	<				<	829	
	-442	>				>	220	
				v	^			
				0	0			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022			15	84	213			
			<	v	>			
	44	^				^	182	
	855	>				<	1015	
	18	v				v	287	
			<	^	>			
			31	55	232			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022				312	281			
				v	^			
	1061	<	IN =	3031		<	1484	
	917	>	OUT =	3031		>	1300	
				v	^			
				389	318			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	23			
			<	v	>			
	2	^				^	12	
	115	>				<	96	
	0	v				v	8	
PCE FACTORS BY AXLE:			<	^	>			
2: 1.5 3: 2 4+: 3.0			0	2	9			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022			15	84	236			
			<	v	>			
	46	^				^	194	
	970	>				<	1111	
	18	v				v	295	
			<	^	>			
			31	57	241			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016				374	932			
				v	^			
	2884	<	IN =	6728		<	4134	
	2220	>	OUT =	6729		>	2913	
				v	^			
				0	0			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016				12	27			
				v	^			
	30	<	IN =	136		<	84	
	40	>	OUT =	137		>	80	
				v	^			
				0	0			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.28			108	268			
PHF FOR TRUCKS:	0.25			v	^			
	815	<	IN =	1918		<	1179	
	632	>	OUT =	1918		>	836	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040				1834	3276			
				v	^			
	1450	<	IN =	10378		<	5023	
	3521	>	OUT =	10378		>	5652	
				v	^			
				0	0			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040				42	79			
				v	^			
	20	<	IN =	223		<	138	
	43	>	OUT =	222		>	123	
				v	^			
				0	0			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS:	0.28			524	937			
PHF FOR TRUCKS:	0.25			v	^			
	411	<	IN =	2962		<	1441	
	997	>	OUT =	2961		>	1613	
				v	^			
				0	0			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO:	2040			416	669			
FACTOR =	1.00			v	^			
	-404	<				<	262	
	365	>				>	778	
				v	^			
				0	0			

Key Pointe Drive (NS) / Main Street (EW) - #3

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					640	330				10 MINIMUM GROWTH %					420	670			
					v	^									v	^			
			480	<	IN =	1570	<	830					120	<	IN =	1050	<	260	
			100	>	OUT =	1030	>	220					370	>	OUT =	1570	>	780	
					v	^									v	^			
					0	0									0	0			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					480	250				18 YEARS					320	500			
					v	^									v	^			
			360	<			<	620					90	<			<	200	
			80	>			>	170					280	>			>	590	
					v	^									v	^			
					0	0									0	0			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					650	420									660	800			
					v	^									v	^			
			980	<			<	1550					1250	<			<	1800	
			1040	>			>	1330					1310	>			>	2040	
					v	^									v	^			
					230	110									400	330			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					50	30				2 YEARS					40	60			
					v	^									v	^			
			40	<			<	70					10	<			<	20	
			10	>			>	20					30	>			>	70	
					v	^									v	^			
					0	0									0	0			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					220	200				2024					380	360			
					v	^									v	^			
			660	<	IN =	2300	<	1000					1170	<	IN =	3390	<	1620	
			970	>	OUT =	2270	>	1180					1060	>	OUT =	3450	>	1520	
					v	^									v	^			
					230	110									400	330			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					220	200				2024					390	360			
					v	^									v	^			
			670	<	IN =	2300	<	1000					1170	<	IN =	3460	<	1650	
			970	>	OUT =	2300	>	1200					1080	>	OUT =	3450	>	1520	
					v	^									v	^			
					230	110									400	340			
ADT BY LEG:										ADT BY LEG:									
2040					16,000					2040					16,000				
					N										N				
			27,700	W	LEG	E		45,500					27,700	W	LEG	E		45,500	
					S										S				
					9,100										9,100				
ADT BY LEG:										ADT BY LEG:									
2024					8,300					2024					8,300				
					N										N				
			25,500	W	LEG	E		36,200					25,500	W	LEG	E		36,200	
					S										S				
					8,400										8,400				

Key Pointe Drive (NS) / Main Street (EW) - #3

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**4**	SOUTH LEG		NORTH	LEFT	**31**	SOUTH LEG	
BOUND	THRU	**12**	IN ...	**110**	BOUND	THRU	**57**	IN ...	**330**
	RIGHT	**97**	OUT ...	**230**		RIGHT	**241**	OUT ...	**400**
SOUTH	LEFT	**137**	NORTH LEG		SOUTH	LEFT	**236**	NORTH LEG	
BOUND	THRU	**26**	IN ...	**650**	BOUND	THRU	**84**	IN ...	**660**
	RIGHT	**11**	OUT ...	**420**		RIGHT	**15**	OUT ...	**800**
EAST	LEFT	**30**	WEST LEG		EAST	LEFT	**46**	WEST LEG	
BOUND	THRU	**926**	IN ...	**1,040**	BOUND	THRU	**970**	IN ...	**1,310**
	RIGHT	**8**	OUT ...	**980**		RIGHT	**18**	OUT ...	**1,250**
WEST	LEFT	**193**	EAST LEG		WEST	LEFT	**295**	EAST LEG	
BOUND	THRU	**607**	IN ...	**1,550**	BOUND	THRU	**1,111**	IN ...	**1,800**
	RIGHT	**132**	OUT ...	**1,330**		RIGHT	**194**	OUT ...	**2,040**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**4**	**5**	NORTH LEG	NORTH	LEFT	**31**	**34**	NORTH LEG	
BOUND	THRU	**12**	**23**	RATIO **6.2%**	BOUND	THRU	**57**	**121**	RATIO **9.5%**	
	RIGHT	**97**	**107**	ADT 16,000		RIGHT	**241**	**265**	ADT 16,000	
SOUTH	LEFT	**137**	**436**	SOUTH LEG	SOUTH	LEFT	**236**	**551**	SOUTH LEG	
BOUND	THRU	**26**	**73**	RATIO **4.7%**	BOUND	THRU	**84**	**139**	RATIO **9.9%**	
	RIGHT	**11**	**60**	ADT 9,100		RIGHT	**15**	**32**	ADT 9,100	
EAST	LEFT	**30**	**74**	EAST LEG	EAST	LEFT	**46**	**143**	EAST LEG	
BOUND	THRU	**926**	**1,019**	RATIO **6.6%**	BOUND	THRU	**970**	**1,274**	RATIO **9.2%**	
	RIGHT	**8**	**9**	ADT 45,500		RIGHT	**18**	**20**	ADT 45,500	
WEST	LEFT	**193**	**212**	WEST LEG	WEST	LEFT	**295**	**325**	WEST LEG	
BOUND	THRU	**607**	**916**	RATIO **7.5%**	BOUND	THRU	**1,111**	**1,222**	RATIO **9.8%**	
	RIGHT	**132**	**323**	ADT 27,700		RIGHT	**194**	**536**	ADT 27,700	

I-15 SB Ramps (NS) / Main Street (EW) - #4

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			145	0	252			
			<	v	>			
0	^					^	363	
848	>					<	632	
111	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				397	363			
				v	^			
777	<	IN =	2351			<	995	
959	>	OUT =	2351			>	1100	
			v	^				
			111	0				

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			32	0	56			
			<	v	>			
0	^					^	148	
161	>					<	124	
42	v					v	0	
			<	^	>			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

			0	0	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			177	0	308			
			<	v	>			
0	^					^	511	
1009	>					<	756	
153	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				774	1475			
				v	^			
2520	<	IN =	5645			<	3607	
1264	>	OUT =	5645			>	1650	
			v	^				
			0	0				

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				9	44			
				v	^			
66	<	IN =	132			<	107	
16	>	OUT =	132			>	22	
			v	^				
			0	0				

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				297	575			
				v	^			
980	<	IN =	2189			<	1406	
486	>	OUT =	2189			>	634	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				1076	1473			
				v	^			
4642	<	IN =	8248			<	5408	
1764	>	OUT =	8247			>	2132	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				47	43			
				v	^			
135	<	IN =	238			<	142	
49	>	OUT =	238			>	60	
			v	^				
			0	0				

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				425	574			
				v	^			
1809	<	IN =	3213			<	2102	
687	>	OUT =	3213			>	830	
			v	^				
			0	0				

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				127	-1			
				v	^			
829	<					<	696	
201	>					>	196	
			v	^				
			0	0				

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			313	0	418			
			<	v	>			
0	^					^	337	
1161	>					<	1172	
142	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				731	337			
				v	^			
1485	<	IN =	3543			<	1509	
1303	>	OUT =	3543			>	1579	
			v	^				
			142	0				

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			38	0	25			
			<	v	>			
0	^					^	81	
111	>					<	81	
36	v					v	0	
			<	^	>			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

			0	0	0			

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			351	0	443			
			<	v	>			
0	^					^	418	
1272	>					<	1253	
178	v					v	0	
			<	^	>			
			0	0	0			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				1065	1281			
				v	^			
4134	<	IN =	8254			<	5050	
2139	>	OUT =	8253			>	2838	
			v	^				
			0	0				

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				9	75			
				v	^			
84	<	IN =	189			<	156	
24	>	OUT =	189			>	30	
			v	^				
			0	0				

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				300	377			
				v	^			
1179	<	IN =	2358			<	1453	
605	>	OUT =	2358			>	802	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				1631	1242			
				v	^			
5023	<	IN =	12124			<	5605	
4888	>	OUT =	12124			>	5859	
			v	^				
			0	0				

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				26	106			
				v	^			
138	<	IN =	314			<	230	
58	>	OUT =	315			>	71	
			v	^				
			0	0				

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				463	374			
				v	^			
1441	<	IN =	3473			<	1627	
1383	>	OUT =	3473			>	1658	
			v	^				
			0	0				

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				163	-3			
				v	^			
262	<					<	174	
778	>					>	856	
			v	^				
			0	0				

I-15 SB Ramps (NS) / Main Street (EW) - #4

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					130	50				10 MINIMUM GROWTH %					160	40			
					v	^									v	^			
			830	<	IN =	1030	<	700					260	<	IN =	1110	<	170	
			200	>	OUT =	1080	>	200					780	>	OUT =	1160	>	860	
					v	^									v	^			
					0	0									0	0			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					100	40				18 YEARS					120	30			
					v	^									v	^			
			620	<			<	530					200	<			<	130	
			150	>			>	150					590	>			>	650	
					v	^									v	^			
					0	0									0	0			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					590	550									910	450			
					v	^									v	^			
			1550	<			<	1800					1800	<			<	1800	
			1310	>			>	1470					2040	>			>	2370	
					v	^									v	^			
					150	0									180	0			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					10	0				2 YEARS					10	0			
					v	^									v	^			
			70	<			<	60					20	<			<	10	
			20	>			>	20					70	>			>	70	
					v	^									v	^			
					0	0									0	0			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					500	510				2024					800	420			
					v	^									v	^			
			1000	<	IN =	3010	<	1330					1620	<	IN =	4000	<	1680	
			1180	>	OUT =	3000	>	1340					1520	>	OUT =	4010	>	1790	
					v	^									v	^			
					150	0									180	0			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					500	510				2024					800	420			
					v	^									v	^			
			1000	<	IN =	3010	<	1330					1620	<	IN =	4000	<	1680	
			1180	>	OUT =	3000	>	1340					1520	>	OUT =	4010	>	1790	
					v	^									v	^			
					150	0									180	0			
ADT BY LEG:										ADT BY LEG:									
2040					16,000					2040					16,000				
					N										N				
			45,300	W	LEG	E		51,000					45,300	W	LEG	E		51,000	
					S										S				
					0										0				
ADT BY LEG:										ADT BY LEG:									
2024					14,100					2024					14,100				
					N										N				
			36,200	W	LEG	E		42,000					36,200	W	LEG	E		42,000	
					S										S				
					0										0				

I-15 SB Ramps (NS) / Main Street (EW) - #4

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**0**	SOUTH LEG		NORTH	LEFT	**0**	SOUTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**150**		RIGHT	**0**	OUT ...	**180**
SOUTH	LEFT	**308**	NORTH LEG		SOUTH	LEFT	**443**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**590**	BOUND	THRU	**0**	IN ...	**910**
	RIGHT	**177**	OUT ...	**550**		RIGHT	**351**	OUT ...	**450**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**1,009**	IN ...	**1,310**	BOUND	THRU	**1,272**	IN ...	**2,040**
	RIGHT	**153**	OUT ...	**1,550**		RIGHT	**178**	OUT ...	**1,800**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**756**	IN ...	**1,800**	BOUND	THRU	**1,253**	IN ...	**1,800**
	RIGHT	**511**	OUT ...	**1,470**		RIGHT	**418**	OUT ...	**2,370**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**0**	**0**	NORTH LEG	NORTH	LEFT	**0**	**0**	NORTH LEG	
BOUND	THRU	**0**	**0**	RATIO **7.3%**	BOUND	THRU	**0**	**0**	RATIO **8.6%**	
	RIGHT	**0**	**0**	ADT 16,000		RIGHT	**0**	**0**	ADT 16,000	
SOUTH	LEFT	**308**	**339**	SOUTH LEG	SOUTH	LEFT	**443**	**496**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO **-**	BOUND	THRU	**0**	**0**	RATIO **-**	
	RIGHT	**177**	**274**	ADT 0		RIGHT	**351**	**423**	ADT 0	
EAST	LEFT	**0**	**0**	EAST LEG	EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**1,009**	**1,152**	RATIO **6.5%**	BOUND	THRU	**1,272**	**1,874**	RATIO **8.3%**	
	RIGHT	**153**	**168**	ADT 51,000		RIGHT	**178**	**196**	ADT 51,000	
WEST	LEFT	**0**	**0**	WEST LEG	WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**756**	**1,276**	RATIO **6.3%**	BOUND	THRU	**1,253**	**1,378**	RATIO **8.5%**	
	RIGHT	**511**	**562**	ADT 45,300		RIGHT	**418**	**460**	ADT 45,300	

I-15 NB Ramps (NS) / Main Street (EW) - #5

MORNING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
		0	^			^	394	
		886	>			<	894	
		251	v			v	0	
			<	^	>			
			54	1	293			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	395			
				v	^			
		948	<	IN =	2773	<	1288	
		1137	>	OUT =	2773	>	1179	
				v	^			
				251	348			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
		0	^			^	67	
		130	>			<	209	
		52	v			v	0	
			<	^	>			
			28	2	118			

PCE FACTORS BY AXLE:

2: 1.5 3: 2.0 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
		0	^			^	461	
		1016	>			<	1103	
		303	v			v	0	
			<	^	>			
			82	3	411			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	721			
				v	^			
		3607	<	IN =	6597	<	4102	
		1401	>	OUT =	6597	>	2269	
				v	^			
				0	1094			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	11			
				v	^			
		107	<	IN =	212	<	104	
		19	>	OUT =	212	>	94	
				v	^			
				0	89			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	278			
				v	^			
		1406	<	IN =	2577	<	1593	
		539	>	OUT =	2577	>	894	
				v	^			
				0	445			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	1086			
				v	^			
		5408	<	IN =	9242	<	5912	
		2132	>	OUT =	9243	>	2749	
				v	^			
				0	1198			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	30			
				v	^			
		142	<	IN =	342	<	139	
		60	>	OUT =	342	>	170	
				v	^			
				0	143			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.38

PHF FOR TRUCKS: 0.333

				0	423			
				v	^			
		2102	<	IN =	3626	<	2293	
		830	>	OUT =	3626	>	1101	
				v	^			
				0	503			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	145			
				v	^			
		696	<			<	699	
		291	>			>	208	
				v	^			
				0	58			

EVENING PEAK HOUR

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (AUTOS):

2022

			0	0	0			
			<	v	>			
		0	^			^	365	
		1332	>			<	1366	
		198	v			v	0	
			<	^	>			
			176	4	641			

EXISTING PEAK HOUR COUNT YEAR (AUTOS):

2022

				0	369			
				v	^			
		1542	<	IN =	4082	<	1731	
		1530	>	OUT =	4082	>	1973	
				v	^			
				198	821			

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (TRUCKS IN PCEs):

			0	0	0			
			<	v	>			
		0	^			^	39	
		116	>			<	163	
		27	v			v	0	
			<	^	>			
			14	0	131			

PCE FACTORS BY AXLE:

2: 1.5 3: 2 4+: 3.0

TOTAL EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES (PCEs):

2022

			0	0	0			
			<	v	>			
		0	^			^	404	
		1448	>			<	1529	
		225	v			v	0	
			<	^	>			
			190	4	772			

EXISTING PEAK PERIOD MODEL YEAR (AUTO):

2016

				0	816			
				v	^			
		5050	<	IN =	11535	<	4220	
		2765	>	OUT =	11535	>	5669	
				v	^			
				0	4550			

EXISTING PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2016

				0	6			
				v	^			
		155	<	IN =	282	<	129	
		30	>	OUT =	281	>	120	
				v	^			
				0	123			

EXISTING PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	230			
				v	^			
		1453	<	IN =	3300	<	1214	
		782	>	OUT =	3300	>	1617	
				v	^			
				0	1305			

FUTURE PEAK PERIOD MODEL YEAR (AUTO):

2040

				0	1576			
				v	^			
		5604	<	IN =	15238	<	5222	
		5854	>	OUT =	15237	>	8057	
				v	^			
				0	4162			

FUTURE PEAK PERIOD MODEL YEAR (TRUCKS IN PCEs):

2040

				0	18			
				v	^			
		230	<	IN =	408	<	204	
		71	>	OUT =	409	>	161	
				v	^			
				0	133			

FUTURE PEAK HOUR MODEL YEAR (PCEs):

PHF FOR CARS: 0.28

PHF FOR TRUCKS: 0.25

				0	446			
				v	^			
		1627	<	IN =	4369	<	1513	
		1657	>	OUT =	4369	>	2296	
				v	^			
				0	1199			

RAW GROWTH (PCEs): 2016 TO 2040

CONVERSION OF TRUCKS TO: 2040

FACTOR = 1.00

				0	216			
				v	^			
		174	<			<	299	
		875	>			>	679	
				v	^			
				0	-106			

I-15 NB Ramps (NS) / Main Street (EW) - #5

MORNING PEAK HOUR										EVENING PEAK HOUR									
ADJUSTED GROWTH (PCEs):	2016	TO	2040							ADJUSTED GROWTH (PCEs):	2016	TO	2040						
10.00 MINIMUM GROWTH %					0	150				10 MINIMUM GROWTH %					0	220			
					v	^									v	^			
			700	<	IN =	1050	<	700					170	<	IN =	1190	<	300	
			290	>	OUT =	1070	>	210					880	>	OUT =	1070	>	680	
					v	^									v	^			
					10	60									0	10			
PRORATED GROWTH (PCEs):	2022	TO	2040							PRORATED GROWTH (PCEs):	2022	TO	2040						
18 YEARS					0	110				18 YEARS					0	170			
					v	^									v	^			
			530	<			<	530					130	<			<	230	
			220	>			>	160					660	>			>	510	
					v	^									v	^			
					10	50									0	10			
NEW PROJECTED VOLUMES (PCEs):	2040									NEW PROJECTED VOLUMES (PCEs):	2040								
					0	570									0	580			
					v	^									v	^			
			1720	<			<	2090					1850	<			<	2160	
			1540	>			>	1590					2330	>			>	2730	
					v	^									v	^			
					310	550									230	980			
YEAR 2024 GROWTH:	2022	TO	2024							YEAR 2024 GROWTH:	2022	TO	2024						
2 YEARS					0	10				2 YEARS					0	20			
					v	^									v	^			
			60	<			<	60					10	<			<	30	
			20	>			>	20					70	>			>	60	
					v	^									v	^			
					0	10									0	0			
INITIAL YEAR 2024 VOLUMES:										INITIAL YEAR 2024 VOLUMES:									
2024					0	470				2024					0	430			
					v	^									v	^			
			1250	<	IN =	3470	<	1620					1730	<	IN =	4670	<	1960	
			1340	>	OUT =	3470	>	1450					1740	>	OUT =	4670	>	2280	
					v	^									v	^			
					300	510									230	970			
BALANCED YEAR 2024 VOLUMES:										BALANCED YEAR 2024 VOLUMES:									
2024					0	470				2024					0	430			
					v	^									v	^			
			1250	<	IN =	3470	<	1620					1730	<	IN =	4670	<	1960	
			1340	>	OUT =	3470	>	1450					1740	>	OUT =	4670	>	2280	
					v	^									v	^			
					300	510									230	970			
ADT BY LEG:										ADT BY LEG:									
2040					6,500					2040					6,500				
					N										N				
			49,600	W	LEG	E		59,200					49,600	W	LEG	E		59,200	
					S										S				
					15,100										15,100				
ADT BY LEG:										ADT BY LEG:									
2024					4,900					2024					4,900				
					N										N				
			40,200	W	LEG	E		49,100					40,200	W	LEG	E		49,100	
					S										S				
					13,900										13,900				

I-15 NB Ramps (NS) / Main Street (EW) - #5

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**82**	SOUTH LEG		NORTH	LEFT	**190**	SOUTH LEG	
BOUND	THRU	**3**	IN ...	**550**	BOUND	THRU	**4**	IN ...	**980**
	RIGHT	**411**	OUT ...	**310**		RIGHT	**772**	OUT ...	**230**
SOUTH	LEFT	**0**	NORTH LEG		SOUTH	LEFT	**0**	NORTH LEG	
BOUND	THRU	**0**	IN ...	**0**	BOUND	THRU	**0**	IN ...	**0**
	RIGHT	**0**	OUT ...	**570**		RIGHT	**0**	OUT ...	**580**
EAST	LEFT	**0**	WEST LEG		EAST	LEFT	**0**	WEST LEG	
BOUND	THRU	**1,016**	IN ...	**1,540**	BOUND	THRU	**1,448**	IN ...	**2,330**
	RIGHT	**303**	OUT ...	**1,720**		RIGHT	**225**	OUT ...	**1,850**
WEST	LEFT	**0**	EAST LEG		WEST	LEFT	**0**	EAST LEG	
BOUND	THRU	**1,103**	IN ...	**2,090**	BOUND	THRU	**1,529**	IN ...	**2,160**
	RIGHT	**461**	OUT ...	**1,590**		RIGHT	**404**	OUT ...	**2,730**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**82**	**137**	NORTH LEG		NORTH	LEFT	**190**	**245**	NORTH LEG	
BOUND	THRU	**3**	**4**	RATIO	**8.8%**	BOUND	THRU	**4**	**7**	RATIO	**8.9%**
	RIGHT	**411**	**452**	ADT	6,500		RIGHT	**772**	**849**	ADT	6,500
SOUTH	LEFT	**0**	**0**	SOUTH LEG		SOUTH	LEFT	**0**	**0**	SOUTH LEG	
BOUND	THRU	**0**	**0**	RATIO	**6.1%**	BOUND	THRU	**0**	**0**	RATIO	**8.9%**
	RIGHT	**0**	**0**	ADT	15,100		RIGHT	**0**	**0**	ADT	15,100
EAST	LEFT	**0**	**0**	EAST LEG		EAST	LEFT	**0**	**0**	EAST LEG	
BOUND	THRU	**1,016**	**1,189**	RATIO	**6.4%**	BOUND	THRU	**1,448**	**2,024**	RATIO	**8.7%**
	RIGHT	**303**	**333**	ADT	59,200		RIGHT	**225**	**248**	ADT	59,200
WEST	LEFT	**0**	**0**	WEST LEG		WEST	LEFT	**0**	**0**	WEST LEG	
BOUND	THRU	**1,103**	**1,583**	RATIO	**6.5%**	BOUND	THRU	**1,529**	**1,682**	RATIO	**8.5%**
	RIGHT	**461**	**566**	ADT	49,600		RIGHT	**404**	**573**	ADT	49,600



GANDDINI GROUP INC.

714.795.3100 | ganddini.com

APPENDIX L
Amargosa and Palmetto High-Cube Warehouse Trip Generation Comparison Analysis

September 6, 2023

Mr. Ramin Namvar
RACHAMIN 5, LLC
6001 East Slauson Avenue
Commerce, California 90040

RE: Amargosa and Palmeto High-Cube Warehouse Truck Trip Generation Comparison Analysis
Project No.: 19522

Dear Mr. Namvar:

Ganddini Group, Inc. is pleased to provide this Truck Trip Generation Comparison Analysis for the proposed Amargosa and Palmeto High-Cube Warehouse Project. The purpose of this trip generation comparison analysis is to evaluate the change in truck trip generation that can be expected between the proposed project and an alternative land use consisting of commercial retail. This Truck Trip Generation Comparison Analysis supplements the Amargosa and *Palmetto High-Cube Warehouse Traffic Impact Analysis* (Ganddini Group, Inc., August 18, 2022). We trust the findings of this analysis will aid you and the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia. The project site is currently undeveloped. Figure 1 illustrates the project location map.

The 30.52-acre project site is proposed to include a 499,850 square foot high-cube fulfillment center warehouse building. The proposed project is anticipated to be constructed and fully operational by year 2024. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). ITE land use code 155 (High-Cube Fulfillment Center Non-Sort) has been used to estimate the site-specific trip generation estimates for up to 499,700 square feet of high-cube fulfillment center (non-sort) use.

The project vehicle trips are converted to Passenger Car Equivalent (PCE) trips based on truck rates (as a percentage of a total vehicle trips) from the ITE *Trip Generation Manual* and truck axle mix data recommended by the South Coast Air Quality Management District (SCAQMD).

As shown in Table 1, the proposed project is forecast to generate approximately 1,083 daily PCE trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

ALTERNATIVE LAND USE DETERMINATION

To determine the truck trips generated for a comparative commercial retail development, juxtaposed to the proposed industrial project, existing commercial retail developments near the project site were considered for analysis. It was determined that the Dunia Plaza development located approximately 2.5 miles northeast of the project along Amargosa Road south of Bear Valley Road provides the ideal location. This shopping center provides various commercial retail land uses, has driveways that allow for the ability to conduct project specific trip generation without interaction with other land uses, and has a total building square footage near the 500,000 square foot proposed project square footage.

It should be noted that this commercial retail development, like the proposed development, is also located along Amargosa Road between Bear Valley Road to the north and Main Street to the south.

Figure 3 shows the commercial retail development that was analyzed. This includes Dunia Plaza, Restaurant Row, and Cracker Barrel Old Country Store. The 16 driveway locations that provide access to/from the commercial retail development are depicted in Figure 3.

The Dunia Plaza development is 601,781 square feet. The Restaurant Row development is 14,750 square feet with Cracker Barrel Old Country Store providing an additional 9,113 square feet. The commercial retail development is a combined 625,644 square feet. Project square footage information for Dunia Plaza was provide by GVD Commercial Properties, Inc. (project management company for Dunia Plaza). Restaurant Row square footage was provided through the City of Victorville Planning Commission Staff Report (September 14, 2016) for PLN16-00014 with the Cracker Barrel Old Country Store square footage provided via LoopNet. Attachment A includes this information.

TRIP GENERATION SURVEY FOR THE EXISTING COMMERCIAL DEVELOPMENT

Existing volumes are based upon 24-hour roadway segment counts separating passenger cars and trucks by axle obtained on Tuesday, August 15, 2023 during typical weekday conditions when schools were in session. The weekday AM peak period was counted between 7:00 AM and 9:00 AM and the weekday PM peak period was counted between 4:00 PM and 6:00 PM; these periods generally capture the peak times for commuter traffic when the roadway system is typically experiencing peak demand. The actual peak hour within each two-hour count period is determined based on the sum of the four consecutive 15-minute periods with the highest total volume. Thus, the weekday PM peak hour may be 4:45 PM to 5:45 PM if those four consecutive 15-minute periods have the highest total volume. Attachment B includes the traffic counts.

Table 2 shows the inbound traffic volumes combined for all 16 driveways and Table 3 shows the outbound traffic volumes combined for all 16 driveways. Table 4 shows the total inbound and outbound traffic volumes combined for all 16 driveways.

ALTERNATIVE LAND USE TRIP GENERATION

Table 5 shows the alternative land use (commercial retail) trip generation based on the traffic volume counts (Tables B-1 to Table B-32 in Attachment B) for 625,644 square feet of commercial retail use.

As shown in Table 5, the alternative (commercial retail) land use currently generates a total of approximately 33,057 daily trips, including 1,182 trips during the AM peak hour and 2,643 trips during the PM peak hour.

As also shown in Table 5, the alternative (commercial retail) land use currently generates a total of approximately 34,145 PCE daily trips, including 1,262 PCE trips during the AM peak hour and 2,691 trips during the PM peak hour.

Table 5 also shows the number of daily, AM peak hour, and PM peak hour truck volumes. The alternative (commercial retail) land use currently generates a total of approximately 1,093 daily truck trips, including 67 truck trips during the AM peak hour and 49 truck trips during the PM peak hour.

ALTERNATIVE LAND USE TRIP GENERATION WITH COMPARATIVE SQUARE FOOTAGE

Table 6 shows the alternative land use (commercial retail) trip generation based on the trip generation rates established through the existing traffic count surveys (see Table 37) for the commercial retail development selected for analysis, for a comparative 499,850 square foot commercial retail development.

As shown in Table 6, the alternative (499,850 square feet of commercial retail) land use is projected to generate a total of approximately 26,410 daily trips, including 944 trips during the AM peak hour and 2,112 trips during the PM peak hour.

As also shown in Table 6, the alternative (499,850 square feet of commercial retail) land use is projected to generate a total of approximately 27,280 PCE daily trips, including 1,007 PCE trips during the AM peak hour and 2,149 trips during the PM peak hour.

Table 6 also shows the number of daily, AM peak hour, and PM peak hour truck volumes. The alternative (499,850 square feet of commercial retail) land use is projected to generate a total of approximately 873 daily truck trips, including 54 truck trips during the AM peak hour and 39 truck trips during the PM peak hour.

TRIP GENERATION COMPARISON

Table 7 shows the difference in project trip generation between the proposed project and the alternative (499,850 square feet of commercial retail) land use. As shown in Table 7, the proposed project is forecast to generate approximately 25,505 fewer daily trips compared to a shopping center land use of equivalent size, including 870 fewer trips during the AM peak hour and 2,035 fewer trips during the PM peak hour.

As also shown in Table 7, the proposed project is forecast to generate approximately 758 fewer daily truck trips compared to a shopping center land use of equivalent size, including 44 fewer truck trips during the AM peak hour and 37 fewer truck trips during the PM peak hour. Therefore, the proposed project is forecast to generate a 659% reduction of daily truck trips compared to a shopping center land use of equivalent size, including a 435% reduction in truck trips during the AM peak hour and a 1,857% reduction in truck trips during the PM peak hour.

Mr. Ramin Namvar
RACHAMIN 5, LLC
September 6, 2023

CONCLUSION

Based on the trip generation comparison analysis, the proposed project consisting of a 499,850 square foot high-cube fulfillment center warehouse building is forecast to generate substantially fewer truck trips (up to 659% fewer daily truck trips) compared to an alternative land use composed of 499,850 square feet of commercial retail.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
Bryan Crawford | Senior Associate
Giancarlo Ganddini, PE, PTP | Principal



Table 1
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.850 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			Daily
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet
(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
(3) PCE = Passenger Car Equivalent
(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 2
Driveways Combined Total (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	8	0	0	0	0	0	8	12:00 PM - 12:15 PM	345	5	1	2	0	2	355
12:15 AM - 12:30 AM	17	0	0	0	0	0	17	12:15 PM - 12:30 PM	326	10	2	0	0	2	340
12:30 AM - 12:45 AM	12	1	0	0	0	0	13	12:30 PM - 12:45 PM	346	7	1	2	0	1	357
12:45 AM - 1:00 AM	8	0	0	2	0	0	10	12:45 PM - 1:00 PM	296	6	0	1	0	0	303
1:00 AM - 1:15 AM	8	1	0	0	0	0	9	1:00 PM - 1:15 PM	289	7	0	0	0	2	298
1:15 AM - 1:30 AM	13	0	0	1	0	0	14	1:15 PM - 1:30 PM	299	8	0	1	2	3	313
1:30 AM - 1:45 AM	4	0	0	1	0	0	5	1:30 PM - 1:45 PM	286	8	1	6	1	0	302
1:45 AM - 2:00 AM	6	1	0	1	0	0	8	1:45 PM - 2:00 PM	286	8	2	2	0	1	299
2:00 AM - 2:15 AM	3	0	0	0	0	0	3	2:00 PM - 2:15 PM	244	9	0	2	0	2	257
2:15 AM - 2:30 AM	4	0	0	0	0	0	4	2:15 PM - 2:30 PM	263	8	2	0	1	2	276
2:30 AM - 2:45 AM	10	0	0	1	0	0	11	2:30 PM - 2:45 PM	267	8	3	2	0	1	281
2:45 AM - 3:00 AM	6	0	0	2	0	0	8	2:45 PM - 3:00 PM	304	7	2	2	0	0	315
3:00 AM - 3:15 AM	8	0	0	0	0	0	8	3:00 PM - 3:15 PM	265	6	0	0	0	1	272
3:15 AM - 3:30 AM	9	3	0	0	0	0	12	3:15 PM - 3:30 PM	317	2	0	0	1	2	322
3:30 AM - 3:45 AM	14	2	0	1	0	0	17	3:30 PM - 3:45 PM	318	5	0	0	0	2	325
3:45 AM - 4:00 AM	20	0	0	0	0	0	20	3:45 PM - 4:00 PM	325	5	1	1	0	1	333
4:00 AM - 4:15 AM	11	1	0	0	0	0	12	4:00 PM - 4:15 PM	301	4	0	1	0	1	307
4:15 AM - 4:30 AM	15	1	0	1	0	0	17	4:15 PM - 4:30 PM	271	3	1	2	0	1	278
4:30 AM - 4:45 AM	30	3	0	0	0	0	33	4:30 PM - 4:45 PM	317	4	1	2	0	1	325
4:45 AM - 5:00 AM	56	0	0	0	0	0	56	4:45 PM - 5:00 PM	365	4	0	0	0	2	371
5:00 AM - 5:15 AM	28	7	0	0	0	0	35	5:00 PM - 5:15 PM	318	3	0	0	0	2	323
5:15 AM - 5:30 AM	26	3	0	1	0	0	30	5:15 PM - 5:30 PM	341	2	0	1	0	0	344
5:30 AM - 5:45 AM	29	4	0	0	0	0	33	5:30 PM - 5:45 PM	294	5	0	1	0	0	300
5:45 AM - 6:00 AM	52	2	0	0	0	0	54	5:45 PM - 6:00 PM	327	4	0	1	1	3	336
6:00 AM - 6:15 AM	58	1	1	1	0	1	62	6:00 PM - 6:15 PM	296	4	1	1	0	0	302
6:15 AM - 6:30 AM	60	3	1	0	0	0	64	6:15 PM - 6:30 PM	305	1	0	0	0	1	307
6:30 AM - 6:45 AM	79	4	1	0	0	0	84	6:30 PM - 6:45 PM	269	1	0	1	0	0	271
6:45 AM - 7:00 AM	96	5	2	1	0	1	105	6:45 PM - 7:00 PM	306	1	1	2	0	1	311
7:00 AM - 7:15 AM	89	5	2	3	1	1	101	7:00 PM - 7:15 PM	263	4	0	0	0	0	267
7:15 AM - 7:30 AM	110	4	0	2	0	0	116	7:15 PM - 7:30 PM	249	1	0	0	0	1	251
7:30 AM - 7:45 AM	107	3	1	0	0	0	111	7:30 PM - 7:45 PM	252	0	0	1	0	0	253
7:45 AM - 8:00 AM	126	6	0	0	0	1	133	7:45 PM - 8:00 PM	222	1	0	1	0	0	224
8:00 AM - 8:15 AM	133	5	0	5	0	1	144	8:00 PM - 8:15 PM	218	3	0	1	0	1	223
8:15 AM - 8:30 AM	151	4	1	4	0	0	160	8:15 PM - 8:30 PM	190	1	0	1	0	1	193
8:30 AM - 8:45 AM	185	4	0	2	0	0	191	8:30 PM - 8:45 PM	155	1	0	3	0	0	159
8:45 AM - 9:00 AM	206	4	2	3	0	1	216	8:45 PM - 9:00 PM	159	0	0	0	0	0	159
9:00 AM - 9:15 AM	259	11	5	4	0	2	281	9:00 PM - 9:15 PM	121	1	1	0	0	2	125
9:15 AM - 9:30 AM	225	10	1	2	0	1	239	9:15 PM - 9:30 PM	116	0	0	1	0	0	117
9:30 AM - 9:45 AM	217	5	0	1	1	1	225	9:30 PM - 9:45 PM	107	0	0	1	0	0	108
9:45 AM - 10:00 AM	252	8	0	1	0	0	261	9:45 PM - 10:00 PM	101	2	0	1	0	0	104
10:00 AM - 10:15 AM	264	6	1	1	0	2	274	10:00 PM - 10:15 PM	77	0	0	0	0	0	77
10:15 AM - 10:30 AM	284	5	1	1	0	1	292	10:15 PM - 10:30 PM	54	1	0	1	0	0	56
10:30 AM - 10:45 AM	278	4	1	1	0	1	285	10:30 PM - 10:45 PM	54	0	1	1	0	0	56
10:45 AM - 11:00 AM	279	12	2	1	0	2	296	10:45 PM - 11:00 PM	33	0	0	0	0	0	33
11:00 AM - 11:15 AM	319	3	0	0	0	3	325	11:00 PM - 11:15 PM	22	0	0	1	0	0	23
11:15 AM - 11:30 AM	287	5	1	3	0	1	297	11:15 PM - 11:30 PM	18	0	0	1	0	0	19
11:30 AM - 11:45 AM	292	9	2	2	0	1	306	11:30 PM - 11:45 PM	15	2	0	0	0	0	17
11:45 AM - 12:00 PM	309	5	0	2	0	1	317	11:45 PM - 12:00 AM	8	2	0	0	0	0	10
Total	5,062	160	25	51	2	22	5,322	Total	10,920	164	21	47	6	39	11,197
								Total AM + PM	15,982	324	46	98	8	61	16,519

Peak Hour															
8:00 AM - 9:00 AM	675	17	3	14	0	2	711	4:45 PM - 5:45 PM	1,318	14	0	2	0	4	1,338

Table 3
Driveways Combined Total (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	43	0	0	0	0	0	43	12:00 PM - 12:15 PM	280	3	1	0	0	3	287
12:15 AM - 12:30 AM	27	0	0	0	0	0	27	12:15 PM - 12:30 PM	330	11	0	1	0	2	344
12:30 AM - 12:45 AM	28	1	0	0	0	0	29	12:30 PM - 12:45 PM	328	4	1	2	0	1	336
12:45 AM - 1:00 AM	13	0	0	0	0	0	13	12:45 PM - 1:00 PM	328	6	0	3	0	0	337
1:00 AM - 1:15 AM	16	0	0	0	0	0	16	1:00 PM - 1:15 PM	327	12	1	1	0	1	342
1:15 AM - 1:30 AM	11	1	0	0	0	0	12	1:15 PM - 1:30 PM	326	4	0	1	0	3	334
1:30 AM - 1:45 AM	9	0	0	0	0	0	9	1:30 PM - 1:45 PM	313	9	2	3	1	1	329
1:45 AM - 2:00 AM	8	0	0	1	0	0	9	1:45 PM - 2:00 PM	304	7	1	2	0	0	314
2:00 AM - 2:15 AM	9	0	0	0	0	0	9	2:00 PM - 2:15 PM	288	12	1	3	1	2	307
2:15 AM - 2:30 AM	6	0	0	1	0	0	7	2:15 PM - 2:30 PM	299	11	1	3	1	3	318
2:30 AM - 2:45 AM	5	0	0	2	0	0	7	2:30 PM - 2:45 PM	274	4	1	1	0	1	281
2:45 AM - 3:00 AM	9	2	0	0	0	0	11	2:45 PM - 3:00 PM	287	9	2	1	0	0	299
3:00 AM - 3:15 AM	9	0	0	0	0	0	9	3:00 PM - 3:15 PM	294	9	2	2	0	1	308
3:15 AM - 3:30 AM	6	0	0	3	0	0	9	3:15 PM - 3:30 PM	289	4	0	0	0	2	295
3:30 AM - 3:45 AM	10	2	0	1	0	0	13	3:30 PM - 3:45 PM	294	5	3	2	0	2	306
3:45 AM - 4:00 AM	9	4	0	0	0	0	13	3:45 PM - 4:00 PM	303	8	0	0	0	0	311
4:00 AM - 4:15 AM	8	0	0	0	0	0	8	4:00 PM - 4:15 PM	298	3	2	0	0	2	305
4:15 AM - 4:30 AM	12	3	0	0	0	0	15	4:15 PM - 4:30 PM	296	6	0	1	0	1	304
4:30 AM - 4:45 AM	8	4	0	0	0	0	12	4:30 PM - 4:45 PM	276	4	1	2	1	1	285
4:45 AM - 5:00 AM	24	0	0	0	0	0	24	4:45 PM - 5:00 PM	325	4	1	0	0	2	332
5:00 AM - 5:15 AM	18	3	0	0	0	0	21	5:00 PM - 5:15 PM	322	6	0	2	1	2	333
5:15 AM - 5:30 AM	14	3	0	0	0	0	17	5:15 PM - 5:30 PM	319	3	0	2	0	0	324
5:30 AM - 5:45 AM	26	3	0	0	0	0	29	5:30 PM - 5:45 PM	310	6	0	0	0	0	316
5:45 AM - 6:00 AM	9	2	0	0	0	0	11	5:45 PM - 6:00 PM	335	6	0	0	0	1	342
6:00 AM - 6:15 AM	37	3	0	1	0	1	42	6:00 PM - 6:15 PM	333	7	0	0	0	2	342
6:15 AM - 6:30 AM	33	1	0	0	0	0	34	6:15 PM - 6:30 PM	302	2	1	0	0	1	306
6:30 AM - 6:45 AM	51	6	1	0	0	0	58	6:30 PM - 6:45 PM	306	0	0	0	0	0	306
6:45 AM - 7:00 AM	70	5	1	2	0	1	79	6:45 PM - 7:00 PM	316	2	0	0	0	1	319
7:00 AM - 7:15 AM	93	7	0	1	0	1	102	7:00 PM - 7:15 PM	296	3	0	0	0	0	299
7:15 AM - 7:30 AM	74	7	3	2	0	0	86	7:15 PM - 7:30 PM	273	0	1	3	0	1	278
7:30 AM - 7:45 AM	99	4	1	2	0	0	106	7:30 PM - 7:45 PM	263	3	0	2	0	0	268
7:45 AM - 8:00 AM	89	8	1	2	1	1	102	7:45 PM - 8:00 PM	248	3	0	1	0	0	252
8:00 AM - 8:15 AM	93	7	0	2	0	1	103	8:00 PM - 8:15 PM	281	2	0	0	0	1	284
8:15 AM - 8:30 AM	102	3	0	2	0	0	107	8:15 PM - 8:30 PM	264	0	0	1	0	1	266
8:30 AM - 8:45 AM	115	4	1	2	0	0	122	8:30 PM - 8:45 PM	241	1	0	1	0	0	243
8:45 AM - 9:00 AM	130	2	1	5	0	1	139	8:45 PM - 9:00 PM	219	0	0	0	0	0	219
9:00 AM - 9:15 AM	173	4	3	2	0	2	184	9:00 PM - 9:15 PM	183	2	0	2	0	2	189
9:15 AM - 9:30 AM	153	7	2	3	0	1	166	9:15 PM - 9:30 PM	174	1	0	0	0	0	175
9:30 AM - 9:45 AM	205	5	1	1	0	1	213	9:30 PM - 9:45 PM	161	0	0	1	0	0	162
9:45 AM - 10:00 AM	209	8	2	2	0	0	221	9:45 PM - 10:00 PM	111	0	0	0	0	0	111
10:00 AM - 10:15 AM	225	8	0	0	0	1	234	10:00 PM - 10:15 PM	144	1	0	0	0	0	145
10:15 AM - 10:30 AM	183	5	1	2	0	1	192	10:15 PM - 10:30 PM	95	0	0	2	0	0	97
10:30 AM - 10:45 AM	246	6	1	1	0	1	255	10:30 PM - 10:45 PM	76	0	0	1	0	0	77
10:45 AM - 11:00 AM	258	10	3	2	1	2	276	10:45 PM - 11:00 PM	85	1	0	1	0	0	87
11:00 AM - 11:15 AM	281	5	2	0	0	2	290	11:00 PM - 11:15 PM	73	0	0	0	0	0	73
11:15 AM - 11:30 AM	271	3	1	0	0	0	275	11:15 PM - 11:30 PM	48	1	1	0	0	0	50
11:30 AM - 11:45 AM	280	2	1	1	0	2	286	11:30 PM - 11:45 PM	27	1	0	1	0	0	29
11:45 AM - 12:00 PM	276	11	0	3	0	2	292	11:45 PM - 12:00 AM	35	0	0	0	0	0	35
Total	4,083	159	26	46	2	21	4,337	Total	11,899	186	23	48	5	40	12,201
								Total AM + PM	15,982	345	49	94	7	61	16,538

Peak Hour															
8:00 AM - 9:00 AM	440	16	2	11	0	2	471	4:45 PM - 5:45 PM	1,276	19	1	4	1	4	1,305

Table 4
Driveways Combined Total (Tuesday, August 15, 2023) - Inbound + Outbound

Inbound + Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	51	0	0	0	0	0	51	12:00 PM - 12:15 PM	625	8	2	2	0	5	642
12:15 AM - 12:30 AM	44	0	0	0	0	0	44	12:15 PM - 12:30 PM	656	21	2	1	0	4	684
12:30 AM - 12:45 AM	40	2	0	0	0	0	42	12:30 PM - 12:45 PM	674	11	2	4	0	2	693
12:45 AM - 1:00 AM	21	0	0	2	0	0	23	12:45 PM - 1:00 PM	624	12	0	4	0	0	640
1:00 AM - 1:15 AM	24	1	0	0	0	0	25	1:00 PM - 1:15 PM	616	19	1	1	0	3	640
1:15 AM - 1:30 AM	24	1	0	1	0	0	26	1:15 PM - 1:30 PM	625	12	0	2	2	6	647
1:30 AM - 1:45 AM	13	0	0	1	0	0	14	1:30 PM - 1:45 PM	599	17	3	9	2	1	631
1:45 AM - 2:00 AM	14	1	0	2	0	0	17	1:45 PM - 2:00 PM	590	15	3	4	0	1	613
2:00 AM - 2:15 AM	12	0	0	0	0	0	12	2:00 PM - 2:15 PM	532	21	1	5	1	4	564
2:15 AM - 2:30 AM	10	0	0	1	0	0	11	2:15 PM - 2:30 PM	562	19	3	3	2	5	594
2:30 AM - 2:45 AM	15	0	0	3	0	0	18	2:30 PM - 2:45 PM	541	12	4	3	0	2	562
2:45 AM - 3:00 AM	15	2	0	2	0	0	19	2:45 PM - 3:00 PM	591	16	4	3	0	0	614
3:00 AM - 3:15 AM	17	0	0	0	0	0	17	3:00 PM - 3:15 PM	559	15	2	2	0	2	580
3:15 AM - 3:30 AM	15	3	0	3	0	0	21	3:15 PM - 3:30 PM	606	6	0	0	1	4	617
3:30 AM - 3:45 AM	24	4	0	2	0	0	30	3:30 PM - 3:45 PM	612	10	3	2	0	4	631
3:45 AM - 4:00 AM	29	4	0	0	0	0	33	3:45 PM - 4:00 PM	628	13	1	1	0	1	644
4:00 AM - 4:15 AM	19	1	0	0	0	0	20	4:00 PM - 4:15 PM	599	7	2	1	0	3	612
4:15 AM - 4:30 AM	27	4	0	1	0	0	32	4:15 PM - 4:30 PM	567	9	1	3	0	2	582
4:30 AM - 4:45 AM	38	7	0	0	0	0	45	4:30 PM - 4:45 PM	593	8	2	4	1	2	610
4:45 AM - 5:00 AM	80	0	0	0	0	0	80	4:45 PM - 5:00 PM	690	8	1	0	0	4	703
5:00 AM - 5:15 AM	46	10	0	0	0	0	56	5:00 PM - 5:15 PM	640	9	0	2	1	4	656
5:15 AM - 5:30 AM	40	6	0	1	0	0	47	5:15 PM - 5:30 PM	660	5	0	3	0	0	668
5:30 AM - 5:45 AM	55	7	0	0	0	0	62	5:30 PM - 5:45 PM	604	11	0	1	0	0	616
5:45 AM - 6:00 AM	61	4	0	0	0	0	65	5:45 PM - 6:00 PM	662	10	0	1	1	4	678
6:00 AM - 6:15 AM	95	4	1	2	0	2	104	6:00 PM - 6:15 PM	629	11	1	1	0	2	644
6:15 AM - 6:30 AM	93	4	1	0	0	0	98	6:15 PM - 6:30 PM	607	3	1	0	0	2	613
6:30 AM - 6:45 AM	130	10	2	0	0	0	142	6:30 PM - 6:45 PM	575	1	0	1	0	0	577
6:45 AM - 7:00 AM	166	10	3	3	0	2	184	6:45 PM - 7:00 PM	622	3	1	2	0	2	630
7:00 AM - 7:15 AM	182	12	2	4	1	2	203	7:00 PM - 7:15 PM	559	7	0	0	0	0	566
7:15 AM - 7:30 AM	184	11	3	4	0	0	202	7:15 PM - 7:30 PM	522	1	1	3	0	2	529
7:30 AM - 7:45 AM	206	7	2	2	0	0	217	7:30 PM - 7:45 PM	515	3	0	3	0	0	521
7:45 AM - 8:00 AM	215	14	1	2	1	2	235	7:45 PM - 8:00 PM	470	4	0	2	0	0	476
8:00 AM - 8:15 AM	226	12	0	7	0	2	247	8:00 PM - 8:15 PM	499	5	0	1	0	2	507
8:15 AM - 8:30 AM	253	7	1	6	0	0	267	8:15 PM - 8:30 PM	454	1	0	2	0	2	459
8:30 AM - 8:45 AM	300	8	1	4	0	0	313	8:30 PM - 8:45 PM	396	2	0	4	0	0	402
8:45 AM - 9:00 AM	336	6	3	8	0	2	355	8:45 PM - 9:00 PM	378	0	0	0	0	0	378
9:00 AM - 9:15 AM	432	15	8	6	0	4	465	9:00 PM - 9:15 PM	304	3	1	2	0	4	314
9:15 AM - 9:30 AM	378	17	3	5	0	2	405	9:15 PM - 9:30 PM	290	1	0	1	0	0	292
9:30 AM - 9:45 AM	422	10	1	2	1	2	438	9:30 PM - 9:45 PM	268	0	0	2	0	0	270
9:45 AM - 10:00 AM	461	16	2	3	0	0	482	9:45 PM - 10:00 PM	212	2	0	1	0	0	215
10:00 AM - 10:15 AM	489	14	1	1	0	3	508	10:00 PM - 10:15 PM	221	1	0	0	0	0	222
10:15 AM - 10:30 AM	467	10	2	3	0	2	484	10:15 PM - 10:30 PM	149	1	0	3	0	0	153
10:30 AM - 10:45 AM	524	10	2	2	0	2	540	10:30 PM - 10:45 PM	130	0	1	2	0	0	133
10:45 AM - 11:00 AM	537	22	5	3	1	4	572	10:45 PM - 11:00 PM	118	1	0	1	0	0	120
11:00 AM - 11:15 AM	600	8	2	0	0	5	615	11:00 PM - 11:15 PM	95	0	0	1	0	0	96
11:15 AM - 11:30 AM	558	8	2	3	0	1	572	11:15 PM - 11:30 PM	66	1	1	1	0	0	69
11:30 AM - 11:45 AM	572	11	3	3	0	3	592	11:30 PM - 11:45 PM	42	3	0	1	0	0	46
11:45 AM - 12:00 PM	585	16	0	5	0	3	609	11:45 PM - 12:00 AM	43	2	0	0	0	0	45
Total	9,145	319	51	97	4	43	9,659	Total	22,819	350	44	95	11	79	23,398
								Total AM + PM	31,964	669	95	192	15	122	33,057

Peak Period															
Morning								Evening							
	Number of Vehicles								Number of Vehicles						
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
7:00 AM - 8:00 AM	787	44	8	12	2	4	857	4:00 PM - 5:00 PM	2,449	32	6	8	1	11	2,507
7:15 AM - 8:15 AM	831	44	6	15	1	4	901	4:15 PM - 5:15 PM	2,490	34	4	9	2	12	2,551
7:30 AM - 8:30 AM	900	40	4	17	1	4	966	4:30 PM - 5:30 PM	2,583	30	3	9	2	10	2,637
7:45 AM - 8:45 AM	994	41	3	19	1	4	1,062	4:45 PM - 5:45 PM	2,594	33	1	6	1	8	2,643
8:00 AM - 9:00 AM	1,115	33	5	25	0	4	1,182	5:00 PM - 6:00 PM	2,566	35	0	7	2	8	2,618
Peak Hour															
8:00 AM - 9:00 AM	1,115	33	5	25	0	4	1,182	4:45 PM - 5:45 PM	2,594	33	1	6	1	8	2,643

Table 5
Commercial Retail Surveyed Trip Generation

Land Use: Commercial Retail
Size: 625.644 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	Counts	60%	40%	1.889	51%	49%	4.224	52.837
Trucks Only	Counts	54%	46%	0.107	41%	59%	0.078	1.747
Passenger Car (94.3% AM, 98.1% PM, 96.7% Daily)		1.072	0.710	1.782	2.099	2.047	4.146	51.090
Truck (5.7% AM, 1.9% PM, 3.3% Daily)		0.058	0.050	0.107	0.032	0.046	0.078	1.747
Truck Mix:	Counts							
2-Axle Trucks (49.3% AM, 67.3% PM, 61.2% Daily)		0.028	0.024	0.053	0.022	0.031	0.053	1.069
3-Axle Trucks (7.5% AM, 2.0% PM, 8.7% Daily)		0.004	0.004	0.008	0.001	0.001	0.002	0.152
4+ Axle Trucks (43.3% AM, 30.6% PM, 30.1% Daily)		0.025	0.021	0.046	0.010	0.014	0.024	0.526

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	675	440	1,115	1,318	1,276	2,594	31,964
Trucks							
2-Axle Trucks	17	16	33	14	19	33	669
3-Axle Trucks	3	2	5	0	1	1	95
4+ Axle Trucks	16	13	29	6	9	15	329
Subtotal	36	31	67	20	29	49	1,093
Total Vehicle Trips Generated	**711**	**471**	**1,182**	**1,338**	**1,305**	**2,643**	**33,057**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	675	440	1,115	1,318	1,276	2,594	31,964
Trucks								
2-Axle Trucks	1.5	26	24	50	21	29	50	1,004
3-Axle Trucks	2.0	6	4	10	0	2	2	190
4+ Axle Trucks	3.0	48	39	87	18	27	45	987
Subtotal		80	67	147	39	58	97	2,181
Total PCE Trips Generated		**755**	**507**	**1,262**	**1,357**	**1,334**	**2,691**	**34,145**

Notes:
(1) TSF = Thousand Square Feet

(2) Traffic counts conducted at project driveways of commercial retail site.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 6
Commercial Retail Surveyed Trip Generation Comparative Square Footage

Land Use: Commercial Retail
Size: 499.850 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			Daily
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Rate
All Vehicles	Counts	60%	40%	1.889	51%	49%	4.224	52.837
Trucks Only	Counts	54%	46%	0.107	41%	59%	0.078	1.747
Passenger Car (94.3% AM, 98.1% PM, 96.7% Daily)		1.072	0.710	1.782	2.099	2.047	4.146	51.090
Truck (5.7% AM, 1.9% PM, 3.3% Daily)		0.058	0.050	0.107	0.032	0.046	0.078	1.747
Truck Mix:	Counts							
2-Axle Trucks (49.3% AM, 67.3% PM, 61.2% Daily)		0.028	0.024	0.053	0.022	0.031	0.053	1.069
3-Axle Trucks (7.5% AM, 2.0% PM, 8.7% Daily)		0.004	0.004	0.008	0.001	0.001	0.002	0.152
4+ Axle Trucks (43.3% AM, 30.6% PM, 30.1% Daily)		0.025	0.021	0.046	0.010	0.014	0.024	0.526

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	536	355	891	1,049	1,023	2,072	25,537
Trucks							
2-Axle Trucks	14	12	26	11	16	26	534
3-Axle Trucks	2	2	4	0	0	1	76
4+ Axle Trucks	12	11	23	5	7	12	263
Subtotal	29	25	54	16	23	39	873
Total Vehicle Trips Generated	**565**	**380**	**944**	**1,065**	**1,046**	**2,112**	**26,410**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	536	355	891	1,049	1,023	2,072	25,537
Trucks								
2-Axle Trucks	1.5	21	18	39	16	23	39	802
3-Axle Trucks	2.0	4	4	8	1	1	2	152
4+ Axle Trucks	3.0	37	32	69	15	21	36	789
Subtotal		62	54	116	32	45	77	1,743
Total PCE Trips Generated		**598**	**409**	**1,007**	**1,081**	**1,068**	**2,149**	**27,280**

Notes:
(1) TSF = Thousand Square Feet

(2) See Table 5

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Table 7
Project Trip Generation Comparison

Land Use	Trips Generated						
	AM Peak Hour			PM Peak Hour			
	In	Out	Total	In	Out	Total	Daily
Project[1]							
- Passenger Cars	52	12	64	29	46	75	790
- Trucks	5	5	10	1	1	2	115
Total	57	17	74	30	47	77	905
Alternative Land Use[2]							
- Passenger Cars	536	355	891	1,049	1,023	2,072	25,537
- Trucks	29	25	54	16	23	39	873
Total	565	380	944	1,065	1,046	2,112	26,410
Difference in Passenger Cars	**-484**	**-343**	**-827**	**-1,020**	**-977**	**-1,997**	**-24,747**
	-930%	**-2,858%**	**-1,292%**	**-3,518%**	**-2,125%**	**-2,663%**	**-3,133%**
Difference in Trucks	**-24**	**-20**	**-44**	**-15**	**-22**	**-37**	**-758**
	-475%	**-395%**	**-435%**	**-1,498%**	**-2,217%**	**-1,857%**	**-659%**
Total Difference	**-508**	**-363**	**-870**	**-1,035**	**-999**	**-2,035**	**-25,505**
	-891%	**-2134%**	**-1176%**	**-3450%**	**-2,126%**	**-2,642%**	**-2,818%**

Notes:
(1) See Table 1.

(2) See Table 6.



Figure 1
Project Location Map

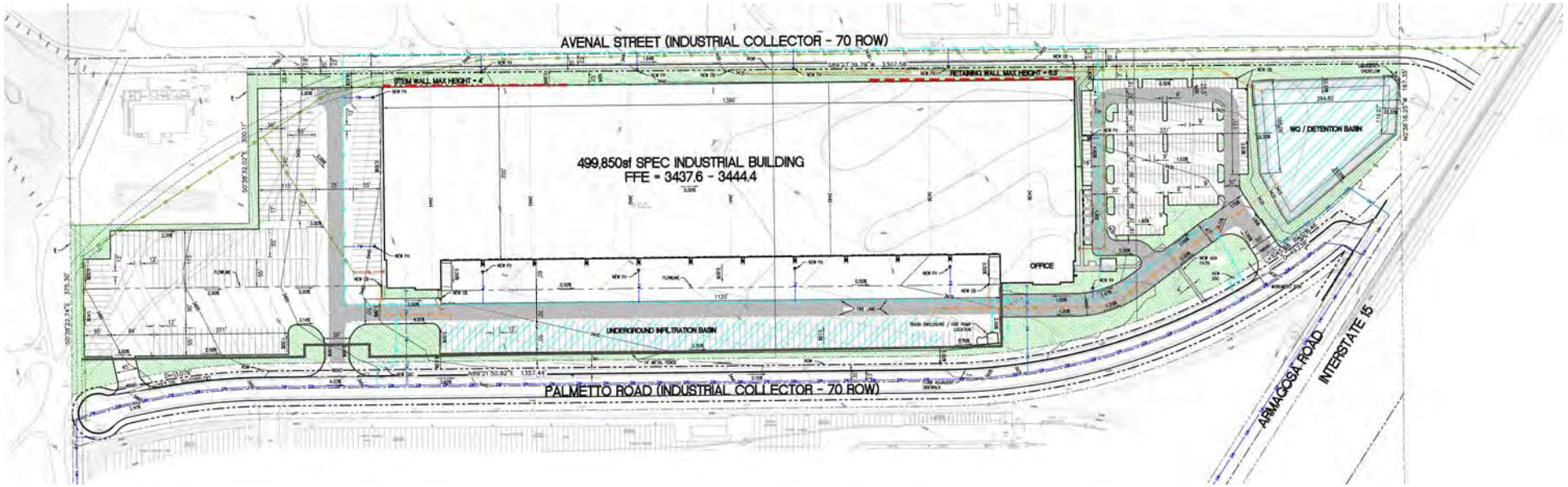


Figure 2
Site Plan



Legend
(#) Study Driveway

Figure 3
Commercial Retail Development

ATTACHMENT A

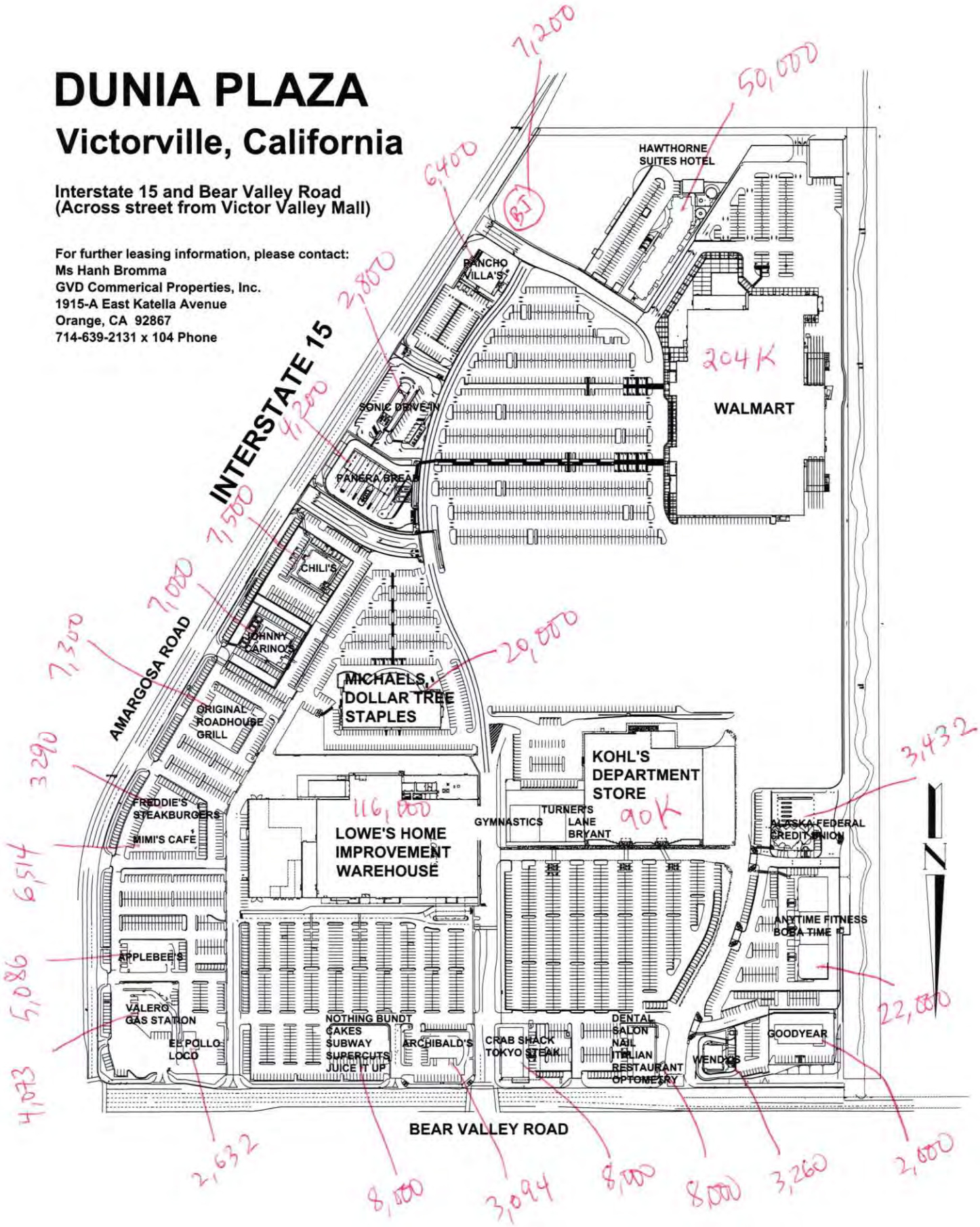
COMMERCIAL SITE INFORMATION

DUNIA PLAZA

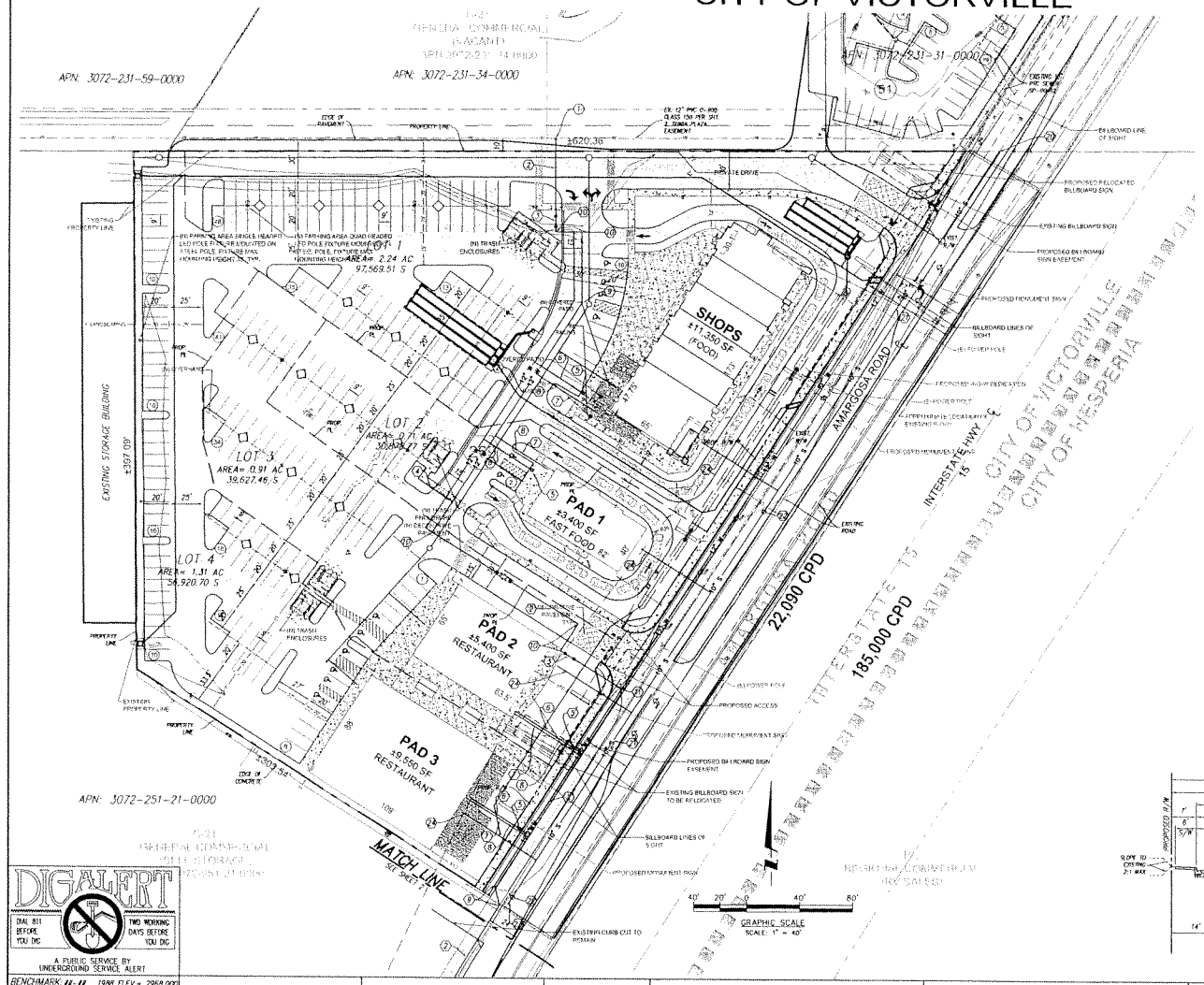
Victorville, California

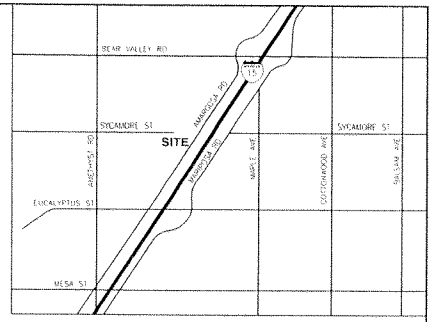
Interstate 15 and Bear Valley Road
(Across street from Victor Valley Mall)

For further leasing information, please contact:
Ms Hanh Bromma
GVD Commerical Properties, Inc.
1915-A East Katella Avenue
Orange, CA 92867
714-639-2131 x 104 Phone



CONCEPTUAL UTILITY PLAN
PARCEL MAP 19766
CITY OF VICTORVILLE





VICINITY MAP
SECTION 1 TOWNSHIP 4 NORTH RANGE 5 WEST
NOT TO SCALE

LEGEND

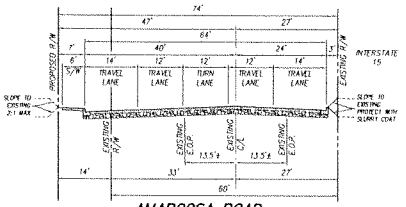
	EXISTING PROPERTY LINE
	EXISTING RIGHT OF WAY
	EXISTING CENTERLINE
	EXISTING EASEMENT
AC.	ACRES
S.F.	SQUARE FEET
C/L	CENTERLINE
R/W	RIGHT OF WAY
S/W	SIDEWALK
EXIST.	EXISTING
T.B.R.	TO BE REMOVED
O.D.E.	OFFER OF DEDICATION
PROP.	PROPOSED

WATER LINE CONSTRUCTION NOTES

1. INSTALL 12" SLEEVE X HOT TAP & VALVE
2. INSTALL 12" PVC C-900 CLASS 150
3. INSTALL 12" BACKFLOW PREVENTER
4. INSTALL FIRE HYDRANT ASSEMBLY
5. INSTALL 2" WATER METER
6. INSTALL 2" DOMESTIC WATER SERVICE
7. INSTALL 8" FIRE WATER LINE
8. INSTALL FDC
9. INSTALL 12" 45° BEND
10. INSTALL 12" 90° BEND
11. INSTALL 12" TEE
12. REMOVE EX. FLGD END CAP W/ THRUST BLOCK AND CONNECT

SEWER CONSTRUCTION NOTES

20. REMOVE CAP AND JOIN EX. 10" SEWER LINE
21. INSTALL 10" SEWER MAIN
22. CONSTRUCT SEWER MANHOLE PER
23. INSTALL 10" SEWER STUB AND CAP
24. INSTALL 6" SEWER LATERAL



OWNER/DEVELOPER

VANTAGECRE REAL ESTATE INVESTMENTS, LLC
4 CORPORATE PLAZA DRIVE, SUITE 210
NEWPORT BEACH, CA 92660
PHONE: (949) 631-6620
CONTACT: TOM ROBINSON

ENGINEER

PSOMAS
1500 IOWA AVENUE, SUITE 210
RIVERSIDE, CA 92507
PHONE: (951) 787-8421
CONTACT: FRANSICO CALDERON

LEGAL DESCRIPTION

PARCEL 2 OF PARCEL MAP NO. 8318, IN THE CITY OF VICTORVILLE, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 86, PAGE 78 OF PARCEL MAPS, SAN BERNARDINO COUNTY RECORDS.

FLOOD ZONE

NO FEMA FLOOD DESIGNATION - AREA NOT INCLUDED IN FLOOD MAP

UTILITY PROVIDERS

WATER AND SEWER: CITY OF VICTORVILLE	(760) 955-5001
ELECTRIC: SOUTHERN CALIFORNIA EDISON	(800) 655-4555
TELEPHONE: VERIZON	(800) 483-4090
GAS: SOUTHWEST GAS CORPORATION	(877) 860-6020
CABLE TV: CHARTER COMMUNICATIONS	(866) 499-8080

ZONING/LAND USE/GENERAL PLAN

EXISTING ZONING: C-2T (GENERAL COMMERCIAL, TRANSITIONAL)
EXISTING LAND USE: VACANT
PROPOSED ZONING: C-2T (GENERAL COMMERCIAL, TRANSITIONAL)
PROPOSED LAND USE: COMMERCIAL / RESTAURANT

ACREAGE

APN: 3072-251-22-0-000	5.38 ACRES
LOT A	0.27 ACRES
NET	5.16 ACRES
LOT 1	2.24 ACRES
LOT 2	0.71 ACRES
LOT 3	0.91 ACRES
LOT 4	1.31 ACRES

DIGALERT
DIAL 811 BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

BENCHMARK: II-II 1998 ELEV.= 2968.000
CITY OF VICTORVILLE
P.K. NAIL AND CITY ENGINEER TAG IN THE .....

PSOMAS
1500 IOWA AVENUE, SUITE 210
RIVERSIDE, CA 92507
(951) 787-8421 WWW.PSOMAS.COM

PREPARED BY: _____ R.C.E. NO. _____ DATE: _____

REVISIONS			
No.	Description	Date	Approved

CITY CASE NO. (to be assigned at plan submittal)

CITY OF VICTORVILLE
ENGINEERING DEPARTMENT
14343 Civic Drive, Victorville, CA 92392 (760) 955-5000

Approved By: _____
Brian W. Gengler, RCE C44730
City Engineer
DATE

CONCEPTUAL COMPOSITE UTILITY PLAN

PARCEL MAP 19766

HORIZ. SCALE: VERT. SCALE: J.N. TVAN0201100

SHEET 1 OF 1

LoopNet™ Log In Sign Up

This Retail Property is no longer advertised on LoopNet.com.

11612 Amargosa Rd
Victorville, CA 92392

Cracker Barrel | 13.5Y Corp. Ground Lease · Retail Property For Sale

Restaurants / California / Victorville /
11612 Amargosa Rd, Victorville, CA 92392



INVESTMENT HIGHLIGHTS

- Brand new 2018 Construction
- NNN Lease with 10% Increases every 5 years
- Southern California Freeway Location, Explosive Trade Area Growth
- Publicly Traded (NASDAQ: CBRL) Corporate Guaranty
- 15-Year Fee Interest Ground Lease - Most Secure Form of Ownership

PROPERTY FACTS

Property Type	**Retail**
Property Subtype	**Restaurant**
Building Size	**9,113 SF**
Building Class	**B**
Year Built	**2018**
Tenancy	**Single**
Building Height	**1 Story**
Building FAR	**0.09**
Land Acres	**2.22 AC**
Zoning	**GC**
Frontage	**216 FT on Amargosa Rd**

ABOUT 11612 AMARGOSA RD VICTORVILLE, CA 92392

Marcus and Millichap has been selected to exclusively represent the sale of Restaurant Row in Victorville, California, a portfolio of category leading national and regional restaurants. The subject property

consists of newly constructed prototypical Cracker Barrel restaurant consisting of 9,113 square feet sitting on an approximate 2.2 acre parcel of land.
The building was tastefully constructed with all of the rustic features Cracker Barrel Old Country Store restaurants are well known for, covered front porch with rocking chairs, brown paneled siding, metal roof and authentic Americana antiques. The offering is a 15 year corporate ground lease (fee interest), with publicly traded Cracker Barrel restaurant (Nasdaq:CBRL) with 10% rent increases every 5 years. This is southern California's first Cracker Barrel and the grand opening was an overwhelming success that generated a tremendous wait from loyal Cracker Barrel patrons. Cracker Barrel has a cult following throughout the country and this location is well positioned along Amorgosa Road and the I-15 freeway. Cracker Barrel Old Country Store, Inc. was established in 1969 in Lebanon, Tennessee. There are currently 640 locations throughout the U.S.
The real estate is well positioned in the trade located adjacent to the I-15 Freeway and Bear Valley Road on and off ramps. Fronting both Amargosa Road and the I-15 freeway the property has excellent identity and traffic

exposure.
The location is prime in the trade area as evidenced by the new development that includes a new 75 room Wyndham Hotel and resort, Super Walmart, Kohl's and Home Goods, TJ Max, 24 Hour Fitness currently under construction at the site. Additionally, a proposed 128 bed trauma center, medical office building, physician village, day care, spiritual care development with a hotel has been approved with all entitlements. This project is comprised of 98 acres along Amargosa Road between Bear Valley and Main Street just 2.8 miles from the subject property. The project part is of the St. Joseph / St. Mary Healthcare system. Restaurant Row is a synergistic mix of restaurants consisting of Starbucks Coffee, nectar juice bar, Which Wich Sandwiches, Pieology Pizza, Ono Hawaiian Barbeque, Café Rio Mexican Grill, Habit Burger and Bj's Pizza. Access points and drive aisles provide excellent ingress and egress from the Wyndham, Walmart and Kohl's for easy access to all of the restaurants. 76% of the leasable area (4 of 6 tenants) have corporate signature absolute net leases. The remaining two tenants are strong franchisees with excellent operational histories and personal rent

guarantees.
The investment provides annual rent growth with increasing cash flow and yield, protecting against inflation with a diversified base of strong restaurant tenants.
The Victor Valley includes the communities of Adelanto, Apple Valley, Hesperia, Lucerne Valley, Oak Hills, Phelan, Victorville and Wrightwood.
Victorville is the business hub of the area and draws consumers from well beyond its immediate area. It is the largest commercial center between San Bernardino and the Nevada border.
The city of Victorville is home to a large and diverse pool of workers and is home to 34 universities, colleges and technical schools providing an abundant supply of skilled labor.

TRANSPORTATION

COMMUTER RAIL

Fontana Commuter Rail (San Bernardino Line) METROLINK.	39 min drive	32.7 mi
Rialto Commuter Rail (San Bernardino Line) METROLINK.	43 min drive	34.4 mi
San Bernardino Commuter Rail (San Bernardino, Inland Empire-Orange	40 min drive	34.5 mi

COMMUTER RAIL

County Lines)		
Rancho Cucamonga Commuter Rail (San Bernardino Line)	43 min drive	36.9 mi
Upland Commuter Rail (San Bernardino Line)	51 min drive	43.8 mi

AIRPORT

Southern California Logistics Airport	19 min drive	12.1 mi
Ontario International Airport	48 min drive	40.8 mi

PROPERTY TAXES

Parcel Number	3072-251-41	Improvements Assessment	$2,444,940
Land Assessment	$3,017,160	Total Assessment	$5,462,100

YOU MAY ALSO LIKE



Multiple Locations - A...
$78,988,250



324-328 S Myrtle Ave - ...
$6,500,000

Listing ID: 14447975 **Date Created:** 11/20/2018 **Last Updated:**

Address: 11612 Amargosa Rd, Victorville, CA

More public record information on 11612 Amargosa Rd, Victorville, CA 92392

The Retail Property at 11612 Amargosa Rd, **Victorville**, CA **92392** is no longer being advertised on LoopNet.com. Contact the broker for information on availability.

NEARBY LISTINGS

17222 Bear Valley Rd, Victorville CA

17100 Bear Valley Rd, Victorville CA

14029 Amargosa Rd, Victorville CA

14895 Bear Valley Rd, Hesperia CA

14073 Main St, Hesperia CA

14330 7th St, Victorville CA

14595 Seventh St, Victorville CA

14670 7th St, Victorville CA

12180 Amargosa Rd, Victorville CA

12220 Hesperia Rd, Victorville CA

15439 Bear Valley Rd, Hesperia CA

14096 Green Tree Blvd, Victorville CA

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ATTACHMENT B

TRAFFIC COUNTS

Table B-1
Driveway 1 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	47	0	0	0	0	0	47
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	45	2	0	0	0	0	47
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	58	0	0	0	0	0	58
12:45 AM - 1:00 AM	0	0	0	1	0	0	1	12:45 PM - 1:00 PM	46	4	0	0	0	0	50
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	53	0	0	0	0	0	53
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	60	0	0	0	1	0	61
1:30 AM - 1:45 AM	0	0	0	1	0	0	1	1:30 PM - 1:45 PM	35	2	1	1	0	0	39
1:45 AM - 2:00 AM	2	0	0	0	0	0	2	1:45 PM - 2:00 PM	48	1	1	0	0	0	50
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	42	0	0	0	0	0	42
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	51	3	0	0	0	0	54
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	33	1	1	0	0	0	35
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	60	0	0	0	0	0	60
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	40	0	0	0	0	0	40
3:15 AM - 3:30 AM	2	1	0	0	0	0	3	3:15 PM - 3:30 PM	56	0	0	0	0	0	56
3:30 AM - 3:45 AM	1	0	0	1	0	0	2	3:30 PM - 3:45 PM	68	2	0	0	0	0	70
3:45 AM - 4:00 AM	2	0	0	0	0	0	2	3:45 PM - 4:00 PM	59	0	0	0	0	0	59
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	40	0	0	0	0	0	40
4:15 AM - 4:30 AM	2	0	0	0	0	0	2	4:15 PM - 4:30 PM	46	1	1	0	0	0	48
4:30 AM - 4:45 AM	3	0	0	0	0	0	3	4:30 PM - 4:45 PM	58	0	0	0	0	0	58
4:45 AM - 5:00 AM	7	0	0	0	0	0	7	4:45 PM - 5:00 PM	56	1	0	0	0	0	57
5:00 AM - 5:15 AM	1	3	0	0	0	0	4	5:00 PM - 5:15 PM	47	0	0	0	0	0	47
5:15 AM - 5:30 AM	4	0	0	0	0	0	4	5:15 PM - 5:30 PM	47	0	0	0	0	0	47
5:30 AM - 5:45 AM	7	0	0	0	0	0	7	5:30 PM - 5:45 PM	44	0	0	0	0	0	44
5:45 AM - 6:00 AM	7	0	0	0	0	0	7	5:45 PM - 6:00 PM	51	1	0	0	0	0	52
6:00 AM - 6:15 AM	3	0	0	1	0	0	4	6:00 PM - 6:15 PM	38	1	1	1	0	0	41
6:15 AM - 6:30 AM	8	0	0	0	0	0	8	6:15 PM - 6:30 PM	50	0	0	0	0	0	50
6:30 AM - 6:45 AM	15	0	0	0	0	0	15	6:30 PM - 6:45 PM	50	1	0	0	0	0	51
6:45 AM - 7:00 AM	17	1	2	0	0	0	20	6:45 PM - 7:00 PM	37	0	0	1	0	0	38
7:00 AM - 7:15 AM	13	0	1	0	1	0	15	7:00 PM - 7:15 PM	33	1	0	0	0	0	34
7:15 AM - 7:30 AM	18	1	0	0	0	0	19	7:15 PM - 7:30 PM	36	0	0	0	0	0	36
7:30 AM - 7:45 AM	14	1	0	0	0	0	15	7:30 PM - 7:45 PM	38	0	0	0	0	0	38
7:45 AM - 8:00 AM	25	0	0	0	0	0	25	7:45 PM - 8:00 PM	27	0	0	0	0	0	27
8:00 AM - 8:15 AM	20	1	0	0	0	0	21	8:00 PM - 8:15 PM	28	0	0	0	0	0	28
8:15 AM - 8:30 AM	19	0	0	1	0	0	20	8:15 PM - 8:30 PM	25	0	0	1	0	0	26
8:30 AM - 8:45 AM	29	0	0	1	0	0	30	8:30 PM - 8:45 PM	20	0	0	0	0	0	20
8:45 AM - 9:00 AM	38	0	0	0	0	0	38	8:45 PM - 9:00 PM	22	0	0	0	0	0	22
9:00 AM - 9:15 AM	45	1	0	2	0	0	48	9:00 PM - 9:15 PM	14	0	0	0	0	0	14
9:15 AM - 9:30 AM	46	2	0	0	0	0	48	9:15 PM - 9:30 PM	7	0	0	0	0	0	7
9:30 AM - 9:45 AM	37	1	0	1	0	0	39	9:30 PM - 9:45 PM	7	0	0	1	0	0	8
9:45 AM - 10:00 AM	42	2	0	1	0	0	45	9:45 PM - 10:00 PM	13	0	0	1	0	0	14
10:00 AM - 10:15 AM	54	1	0	1	0	0	56	10:00 PM - 10:15 PM	6	0	0	0	0	0	6
10:15 AM - 10:30 AM	46	1	0	0	0	1	48	10:15 PM - 10:30 PM	5	0	0	1	0	0	6
10:30 AM - 10:45 AM	46	1	1	0	0	0	48	10:30 PM - 10:45 PM	10	0	0	0	0	0	10
10:45 AM - 11:00 AM	40	2	1	0	0	0	43	10:45 PM - 11:00 PM	6	0	0	0	0	0	6
11:00 AM - 11:15 AM	45	0	0	0	0	0	45	11:00 PM - 11:15 PM	6	0	0	0	0	0	6
11:15 AM - 11:30 AM	52	0	0	1	0	0	53	11:15 PM - 11:30 PM	4	0	0	0	0	0	4
11:30 AM - 11:45 AM	42	3	0	1	0	1	47	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	51	1	0	0	0	0	52	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	808	23	5	13	1	2	852	Total	1,674	21	5	7	1	0	1,708
								Total AM + PM	2,482	44	10	20	2	2	2,560

Table B-2
Driveway 1 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	9	0	0	0	0	0	9	12:00 PM - 12:15 PM	63	0	0	0	0	0	63
12:15 AM - 12:30 AM	3	0	0	0	0	0	3	12:15 PM - 12:30 PM	66	2	0	0	0	0	68
12:30 AM - 12:45 AM	4	0	0	0	0	0	4	12:30 PM - 12:45 PM	63	0	0	0	0	0	63
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	67	1	0	1	0	0	69
1:00 AM - 1:15 AM	3	0	0	0	0	0	3	1:00 PM - 1:15 PM	56	0	0	0	0	0	56
1:15 AM - 1:30 AM	4	0	0	0	0	0	4	1:15 PM - 1:30 PM	59	0	0	0	0	0	59
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	58	0	0	0	0	0	58
1:45 AM - 2:00 AM	0	0	0	1	0	0	1	1:45 PM - 2:00 PM	59	1	1	2	0	0	63
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	59	1	0	0	0	0	60
2:15 AM - 2:30 AM	0	0	0	1	0	0	1	2:15 PM - 2:30 PM	67	0	0	0	0	0	67
2:30 AM - 2:45 AM	1	0	0	0	0	0	1	2:30 PM - 2:45 PM	54	1	1	0	0	0	56
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	64	3	1	0	0	0	68
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	55	1	0	0	0	0	56
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	55	0	0	0	0	0	55
3:30 AM - 3:45 AM	3	0	0	0	0	0	3	3:30 PM - 3:45 PM	62	1	0	0	0	0	63
3:45 AM - 4:00 AM	2	1	0	0	0	0	3	3:45 PM - 4:00 PM	65	2	0	0	0	0	67
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	59	1	0	0	0	0	60
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	75	0	0	0	0	0	75
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	64	0	1	1	0	0	66
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	66	1	0	0	0	0	67
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	62	1	0	0	0	0	63
5:15 AM - 5:30 AM	1	0	0	0	0	0	1	5:15 PM - 5:30 PM	59	0	0	1	0	0	60
5:30 AM - 5:45 AM	3	2	0	0	0	0	5	5:30 PM - 5:45 PM	57	0	0	0	0	0	57
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	64	1	0	0	0	0	65
6:00 AM - 6:15 AM	1	0	0	1	0	0	2	6:00 PM - 6:15 PM	68	2	0	0	0	0	70
6:15 AM - 6:30 AM	6	0	0	0	0	0	6	6:15 PM - 6:30 PM	64	1	0	0	0	0	65
6:30 AM - 6:45 AM	3	0	0	0	0	0	3	6:30 PM - 6:45 PM	71	0	0	0	0	0	71
6:45 AM - 7:00 AM	9	1	1	0	0	0	11	6:45 PM - 7:00 PM	44	0	0	0	0	0	44
7:00 AM - 7:15 AM	10	1	0	0	0	0	11	7:00 PM - 7:15 PM	52	1	0	0	0	0	53
7:15 AM - 7:30 AM	17	1	0	0	0	0	18	7:15 PM - 7:30 PM	59	0	0	0	0	0	59
7:30 AM - 7:45 AM	16	1	0	0	0	0	17	7:30 PM - 7:45 PM	46	1	0	0	0	0	47
7:45 AM - 8:00 AM	21	1	0	1	0	0	23	7:45 PM - 8:00 PM	49	0	0	0	0	0	49
8:00 AM - 8:15 AM	14	0	0	0	0	0	14	8:00 PM - 8:15 PM	56	0	0	0	0	0	56
8:15 AM - 8:30 AM	23	1	0	1	0	0	25	8:15 PM - 8:30 PM	53	0	0	0	0	0	53
8:30 AM - 8:45 AM	23	0	1	1	0	0	25	8:30 PM - 8:45 PM	45	0	0	0	0	0	45
8:45 AM - 9:00 AM	30	0	0	1	0	0	31	8:45 PM - 9:00 PM	38	0	0	0	0	0	38
9:00 AM - 9:15 AM	30	0	1	1	0	1	33	9:00 PM - 9:15 PM	33	0	0	0	0	0	33
9:15 AM - 9:30 AM	26	0	0	0	0	0	26	9:15 PM - 9:30 PM	22	0	0	0	0	0	22
9:30 AM - 9:45 AM	39	1	0	0	0	0	40	9:30 PM - 9:45 PM	21	0	0	0	0	0	21
9:45 AM - 10:00 AM	43	0	0	1	0	0	44	9:45 PM - 10:00 PM	16	0	0	0	0	0	16
10:00 AM - 10:15 AM	36	2	0	0	0	0	38	10:00 PM - 10:15 PM	20	0	0	0	0	0	20
10:15 AM - 10:30 AM	35	1	0	1	0	0	37	10:15 PM - 10:30 PM	10	0	0	1	0	0	11
10:30 AM - 10:45 AM	46	3	1	1	0	0	51	10:30 PM - 10:45 PM	9	0	0	0	0	0	9
10:45 AM - 11:00 AM	57	1	0	0	0	0	58	10:45 PM - 11:00 PM	10	1	0	1	0	0	12
11:00 AM - 11:15 AM	51	1	0	0	0	0	52	11:00 PM - 11:15 PM	15	0	0	0	0	0	15
11:15 AM - 11:30 AM	56	1	0	0	0	0	57	11:15 PM - 11:30 PM	7	0	0	0	0	0	7
11:30 AM - 11:45 AM	35	0	0	0	0	0	35	11:30 PM - 11:45 PM	3	0	0	0	0	0	3
11:45 AM - 12:00 PM	47	0	0	0	0	1	48	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	712	19	4	11	0	2	748	Total	2,291	23	4	7	0	0	2,325
								Total AM + PM	3,003	42	8	18	0	2	3,073

Table B-3
Driveway 2 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	0	0	0	0	0	0	0
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	2	0	0	0	0	0	2
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	1	0	0	0	0	0	1
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	2	0	0	0	0	0	2
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	1	0	0	0	0	0	1
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	3	0	0	0	0	0	3
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	2	0	0	0	0	0	2
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	3	1	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	2	0	0	0	0	0	2
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	0	1	0	0	0	0	1
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	1	0	0	0	0	0	1
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	1	0	0	0	0	0	1
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	2	0	0	0	0	0	2
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	1	0	0	0	0	0	1
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	1	0	0	0	0	0	1
3:45 AM - 4:00 AM	2	0	0	0	0	0	2	3:45 PM - 4:00 PM	3	0	0	0	0	0	3
4:00 AM - 4:15 AM	0	1	0	0	0	0	1	4:00 PM - 4:15 PM	2	0	0	0	0	0	2
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	1	0	0	0	0	0	1
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	1	0	0	0	0	0	1
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	2	0	0	0	0	0	2
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	1	0	0	0	0	0	1
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	3	0	0	0	0	0	3
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	1	0	0	0	0	0	1
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	3	0	0	0	0	0	3
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	3	0	0	0	0	0	3
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	1	0	0	0	0	0	1
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	3	0	0	0	0	0	3
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	3	0	0	0	0	0	3
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	4	0	0	0	0	0	4
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	2	0	0	0	0	0	2
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	1	0	0	0	0	0	1
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	2	0	0	0	0	0	2
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	8:15 PM - 8:30 PM	1	0	0	0	0	0	1
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	8:30 PM - 8:45 PM	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	0	0	0	0	0	0	0
9:00 AM - 9:15 AM	2	0	0	0	0	0	2	9:00 PM - 9:15 PM	0	0	0	0	0	0	0
9:15 AM - 9:30 AM	2	0	0	0	0	0	2	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	2	0	0	0	1	0	3	9:30 PM - 9:45 PM	1	0	0	0	0	0	1
9:45 AM - 10:00 AM	1	0	0	0	0	0	1	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	1	0	0	0	0	0	1	10:00 PM - 10:15 PM	0	0	0	0	0	0	0
10:15 AM - 10:30 AM	2	0	0	0	0	0	2	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	2	0	0	0	0	0	2	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	2	0	0	0	0	0	2	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	5	0	0	0	0	0	5	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	2	0	0	0	0	0	2	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	2	0	0	0	0	0	2	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	35	1	0	0	1	0	37	Total	62	2	0	0	0	0	64
								Total AM + PM	97	3	0	0	1	0	101

Table B-4
Driveway 2 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	2	0	0	0	0	0	2
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	5	0	0	0	0	0	5
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	5	0	0	1	0	0	6
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	10	0	0	0	0	0	10
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	4	0	0	0	0	0	4
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	10	0	0	0	0	0	10
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	4	0	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	3	1	0	0	0	0	4
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	5	1	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	11	0	0	0	0	0	11
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	3	1	0	0	0	0	4
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	3	0	0	0	0	0	3
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	5	1	0	0	0	0	6
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	3	0	0	0	0	0	3
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	3	0	0	0	0	0	3
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	3	0	0	0	0	0	3
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	6	1	0	0	0	0	7
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	4	0	0	0	0	0	4
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	12	0	0	0	0	0	12
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	5	0	0	0	0	0	5
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	6	0	0	0	0	0	6
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	7	0	0	0	0	0	7
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	9	0	0	0	0	0	9
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	2	0	0	0	0	0	2
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	2	0	0	0	0	0	2
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	9	0	0	0	0	0	9
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	8:30 PM - 8:45 PM	3	0	0	0	0	0	3
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	6	0	0	0	0	0	6
9:00 AM - 9:15 AM	0	0	0	0	0	0	0	9:00 PM - 9:15 PM	0	1	0	0	0	0	1
9:15 AM - 9:30 AM	1	0	0	0	0	0	1	9:15 PM - 9:30 PM	1	0	0	0	0	0	1
9:30 AM - 9:45 AM	2	0	0	0	0	0	2	9:30 PM - 9:45 PM	1	0	0	0	0	0	1
9:45 AM - 10:00 AM	3	0	0	0	0	0	3	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	3	0	0	0	0	0	3
10:15 AM - 10:30 AM	3	0	0	0	0	0	3	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	4	0	0	0	0	0	4	10:30 PM - 10:45 PM	2	0	0	0	0	0	2
10:45 AM - 11:00 AM	5	1	0	0	0	0	6	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	1	0	0	0	0	0	1	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	4	0	0	0	0	0	4	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	7	0	0	0	0	0	7	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	5	0	0	0	0	0	5	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	40	1	0	0	0	0	41	Total	198	6	0	1	0	0	205
								Total AM + PM	238	7	0	1	0	0	246

Table B-5
Driveway 3 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	99	4	0	1	0	1	105
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	99	1	1	0	0	1	102
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	106	5	1	2	0	1	115
12:45 AM - 1:00 AM	1	0	0	1	0	0	2	12:45 PM - 1:00 PM	93	1	0	0	0	0	94
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	92	3	0	0	0	1	96
1:15 AM - 1:30 AM	4	0	0	1	0	0	5	1:15 PM - 1:30 PM	81	2	0	0	0	1	84
1:30 AM - 1:45 AM	1	0	0	0	0	0	1	1:30 PM - 1:45 PM	101	1	0	1	0	0	103
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	83	2	0	1	0	0	86
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	76	6	0	1	0	1	84
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	79	0	2	0	0	1	82
2:30 AM - 2:45 AM	3	0	0	1	0	0	4	2:30 PM - 2:45 PM	80	2	2	2	0	1	87
2:45 AM - 3:00 AM	1	0	0	2	0	0	3	2:45 PM - 3:00 PM	79	3	0	1	0	0	83
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	74	2	0	0	0	0	76
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	96	2	0	0	0	1	99
3:30 AM - 3:45 AM	2	0	0	0	0	0	2	3:30 PM - 3:45 PM	79	1	0	0	0	1	81
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	99	1	0	1	0	1	102
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	89	2	0	0	0	0	91
4:15 AM - 4:30 AM	3	0	0	0	0	0	3	4:15 PM - 4:30 PM	77	2	0	2	0	1	82
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	76	3	0	0	0	0	79
4:45 AM - 5:00 AM	16	0	0	0	0	0	16	4:45 PM - 5:00 PM	102	3	0	0	0	1	106
5:00 AM - 5:15 AM	7	1	0	0	0	0	8	5:00 PM - 5:15 PM	99	2	0	0	0	1	102
5:15 AM - 5:30 AM	6	0	0	0	0	0	6	5:15 PM - 5:30 PM	96	0	0	0	0	0	96
5:30 AM - 5:45 AM	6	1	0	0	0	0	7	5:30 PM - 5:45 PM	81	4	0	0	0	0	85
5:45 AM - 6:00 AM	10	2	0	0	0	0	12	5:45 PM - 6:00 PM	110	1	0	1	1	1	114
6:00 AM - 6:15 AM	14	1	1	0	0	1	17	6:00 PM - 6:15 PM	100	0	0	0	0	0	100
6:15 AM - 6:30 AM	13	1	0	0	0	0	14	6:15 PM - 6:30 PM	83	0	0	0	0	1	84
6:30 AM - 6:45 AM	14	2	1	0	0	0	17	6:30 PM - 6:45 PM	67	0	0	0	0	0	67
6:45 AM - 7:00 AM	18	0	0	1	0	0	19	6:45 PM - 7:00 PM	103	0	1	0	0	0	104
7:00 AM - 7:15 AM	14	1	1	2	0	1	19	7:00 PM - 7:15 PM	77	2	0	0	0	0	79
7:15 AM - 7:30 AM	24	2	0	0	0	0	26	7:15 PM - 7:30 PM	73	0	0	0	0	1	74
7:30 AM - 7:45 AM	30	1	0	0	0	0	31	7:30 PM - 7:45 PM	68	0	0	0	0	0	68
7:45 AM - 8:00 AM	33	3	0	0	0	0	36	7:45 PM - 8:00 PM	59	1	0	1	0	0	61
8:00 AM - 8:15 AM	31	2	0	1	0	1	35	8:00 PM - 8:15 PM	50	0	0	0	0	0	50
8:15 AM - 8:30 AM	40	2	1	1	0	0	44	8:15 PM - 8:30 PM	49	0	0	0	0	1	50
8:30 AM - 8:45 AM	51	3	0	0	0	0	54	8:30 PM - 8:45 PM	41	0	0	0	0	0	41
8:45 AM - 9:00 AM	58	0	0	3	0	0	61	8:45 PM - 9:00 PM	34	0	0	0	0	0	34
9:00 AM - 9:15 AM	86	6	3	1	0	1	97	9:00 PM - 9:15 PM	28	0	0	0	0	1	29
9:15 AM - 9:30 AM	63	4	0	1	0	0	68	9:15 PM - 9:30 PM	21	0	0	1	0	0	22
9:30 AM - 9:45 AM	67	1	0	0	0	1	69	9:30 PM - 9:45 PM	20	0	0	0	0	0	20
9:45 AM - 10:00 AM	73	2	0	0	0	0	75	9:45 PM - 10:00 PM	20	1	0	0	0	0	21
10:00 AM - 10:15 AM	76	3	1	0	0	1	81	10:00 PM - 10:15 PM	11	0	0	0	0	0	11
10:15 AM - 10:30 AM	89	3	1	0	0	0	93	10:15 PM - 10:30 PM	9	1	0	0	0	0	10
10:30 AM - 10:45 AM	79	0	0	0	0	0	79	10:30 PM - 10:45 PM	8	0	0	0	0	0	8
10:45 AM - 11:00 AM	106	3	1	0	0	1	111	10:45 PM - 11:00 PM	6	0	0	0	0	0	6
11:00 AM - 11:15 AM	104	2	0	0	0	2	108	11:00 PM - 11:15 PM	4	0	0	0	0	0	4
11:15 AM - 11:30 AM	78	1	0	1	0	1	81	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	88	2	1	0	0	0	91	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	90	1	0	0	0	0	91	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	1,412	50	11	16	0	10	1,499	Total	3,081	58	7	15	1	19	3,181
								Total AM + PM	4,493	108	18	31	1	29	4,680

Table B-6
Driveway 3 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	7	0	0	0	0	0	7	12:00 PM - 12:15 PM	80	2	0	0	0	2	84
12:15 AM - 12:30 AM	5	0	0	0	0	0	5	12:15 PM - 12:30 PM	88	4	0	1	0	1	94
12:30 AM - 12:45 AM	6	0	0	0	0	0	6	12:30 PM - 12:45 PM	101	2	1	0	0	0	104
12:45 AM - 1:00 AM	5	0	0	0	0	0	5	12:45 PM - 1:00 PM	90	2	0	1	0	0	93
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	89	4	0	0	0	1	94
1:15 AM - 1:30 AM	2	0	0	0	0	0	2	1:15 PM - 1:30 PM	87	1	0	1	0	2	91
1:30 AM - 1:45 AM	1	0	0	0	0	0	1	1:30 PM - 1:45 PM	87	3	2	1	0	0	93
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	74	2	0	0	0	0	76
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	78	3	0	1	1	2	85
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	84	4	0	2	0	1	91
2:30 AM - 2:45 AM	2	0	0	0	0	0	2	2:30 PM - 2:45 PM	78	2	0	0	0	0	80
2:45 AM - 3:00 AM	1	2	0	0	0	0	3	2:45 PM - 3:00 PM	72	1	1	0	0	0	74
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	77	4	1	1	0	1	84
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	81	2	0	0	0	1	84
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	76	0	0	0	0	1	77
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	82	2	0	0	0	0	84
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	79	1	0	0	0	1	81
4:15 AM - 4:30 AM	1	1	0	0	0	0	2	4:15 PM - 4:30 PM	86	2	0	1	0	0	89
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	60	2	0	1	0	1	64
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	85	0	0	0	0	1	86
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	90	3	0	1	0	1	95
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	102	2	0	0	0	0	104
5:30 AM - 5:45 AM	4	0	0	0	0	0	4	5:30 PM - 5:45 PM	67	2	0	0	0	0	69
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	93	2	0	0	0	1	96
6:00 AM - 6:15 AM	5	1	0	0	0	0	6	6:00 PM - 6:15 PM	85	1	0	0	0	1	87
6:15 AM - 6:30 AM	7	0	0	0	0	0	7	6:15 PM - 6:30 PM	88	1	1	0	0	0	90
6:30 AM - 6:45 AM	11	0	0	0	0	0	11	6:30 PM - 6:45 PM	83	0	0	0	0	0	83
6:45 AM - 7:00 AM	15	2	0	0	0	1	18	6:45 PM - 7:00 PM	92	0	0	0	0	1	93
7:00 AM - 7:15 AM	17	0	0	0	0	0	17	7:00 PM - 7:15 PM	94	0	0	0	0	0	94
7:15 AM - 7:30 AM	8	1	3	1	0	0	13	7:15 PM - 7:30 PM	63	0	0	0	0	0	63
7:30 AM - 7:45 AM	18	3	0	0	0	0	21	7:30 PM - 7:45 PM	78	1	0	1	0	0	80
7:45 AM - 8:00 AM	22	2	0	1	1	1	27	7:45 PM - 8:00 PM	60	1	0	0	0	0	61
8:00 AM - 8:15 AM	26	0	0	0	0	0	26	8:00 PM - 8:15 PM	76	0	0	0	0	1	77
8:15 AM - 8:30 AM	18	0	0	0	0	0	18	8:15 PM - 8:30 PM	56	0	0	0	0	0	56
8:30 AM - 8:45 AM	19	3	0	0	0	0	22	8:30 PM - 8:45 PM	54	0	0	0	0	0	54
8:45 AM - 9:00 AM	27	0	0	2	0	1	30	8:45 PM - 9:00 PM	64	0	0	0	0	0	64
9:00 AM - 9:15 AM	48	1	0	1	0	0	50	9:00 PM - 9:15 PM	46	1	0	1	0	1	49
9:15 AM - 9:30 AM	33	2	1	0	0	1	37	9:15 PM - 9:30 PM	53	0	0	0	0	0	53
9:30 AM - 9:45 AM	50	0	1	1	0	0	52	9:30 PM - 9:45 PM	46	0	0	0	0	0	46
9:45 AM - 10:00 AM	58	5	1	1	0	0	65	9:45 PM - 10:00 PM	30	0	0	0	0	0	30
10:00 AM - 10:15 AM	67	1	0	0	0	1	69	10:00 PM - 10:15 PM	27	1	0	0	0	0	28
10:15 AM - 10:30 AM	57	1	0	1	0	0	59	10:15 PM - 10:30 PM	19	0	0	0	0	0	19
10:30 AM - 10:45 AM	71	1	0	0	0	1	73	10:30 PM - 10:45 PM	24	0	0	0	0	0	24
10:45 AM - 11:00 AM	66	4	1	0	0	1	72	10:45 PM - 11:00 PM	18	0	0	0	0	0	18
11:00 AM - 11:15 AM	69	1	1	0	0	1	72	11:00 PM - 11:15 PM	14	0	0	0	0	0	14
11:15 AM - 11:30 AM	67	0	0	0	0	0	67	11:15 PM - 11:30 PM	10	0	0	0	0	0	10
11:30 AM - 11:45 AM	90	2	0	0	0	0	92	11:30 PM - 11:45 PM	6	0	0	0	0	0	6
11:45 AM - 12:00 PM	73	1	0	0	0	1	75	11:45 PM - 12:00 AM	10	0	0	0	0	0	10
Total	986	34	8	8	1	9	1,046	Total	3,182	58	6	13	1	21	3,281
								Total AM + PM	4,168	92	14	21	2	30	4,327

Table B-7
Driveway 4 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	16	0	0	0	0	0	16
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	9	3	0	0	0	0	12
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	13	0	0	0	0	0	13
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	11	0	0	0	0	0	11
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	14	0	0	0	0	0	14
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	6	0	0	0	0	0	6
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	11	0	0	0	0	0	11
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	10	0	0	0	0	0	10
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	1	0	0	0	0	8
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	15	1	0	0	0	0	16
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	16	0	0	0	0	0	16
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	10	0	0	0	0	0	10
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	12	0	0	0	0	0	12
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	14	1	0	0	0	0	15
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	10	0	0	1	0	0	11
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	7	0	0	0	0	0	7
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	15	0	0	0	0	0	15
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	25	0	0	0	0	0	25
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	15	0	0	0	0	0	15
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	13	0	0	0	0	0	13
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	17	0	0	0	0	0	17
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	10	0	0	0	0	0	10
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	6	0	0	0	0	0	6
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	2	0	0	0	0	0	2	6:30 PM - 6:45 PM	5	0	0	0	0	0	5
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	7	0	0	0	0	0	7
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	6	0	0	0	0	0	6
7:15 AM - 7:30 AM	1	0	0	0	0	0	1	7:15 PM - 7:30 PM	1	0	0	0	0	0	1
7:30 AM - 7:45 AM	1	0	0	0	0	0	1	7:30 PM - 7:45 PM	9	0	0	0	0	0	9
7:45 AM - 8:00 AM	4	0	0	0	0	0	4	7:45 PM - 8:00 PM	7	0	0	0	0	0	7
8:00 AM - 8:15 AM	4	0	0	0	0	0	4	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	4	0	0	0	0	0	4	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	5	1	0	0	0	0	6	8:30 PM - 8:45 PM	3	0	0	0	0	0	3
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	5	0	1	0	0	0	6	9:00 PM - 9:15 PM	1	0	0	0	0	0	1
9:15 AM - 9:30 AM	5	0	0	0	0	0	5	9:15 PM - 9:30 PM	0	0	0	0	0	0	0
9:30 AM - 9:45 AM	9	0	0	0	0	0	9	9:30 PM - 9:45 PM	2	0	0	0	0	0	2
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	8	0	0	0	0	0	8	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	7	1	0	0	0	0	8	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	7	0	0	0	0	0	7	10:30 PM - 10:45 PM	0	0	0	1	0	0	1
10:45 AM - 11:00 AM	8	0	0	0	0	0	8	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	15	0	0	0	0	0	15	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	9	0	0	0	0	0	9	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	8	1	0	0	0	0	9	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	11	0	0	0	0	0	11	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	130	3	1	0	0	0	134	Total	357	6	0	2	0	0	365
								Total AM + PM	487	9	1	2	0	0	499

Table B-8
Driveway 4 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	13	0	0	0	0	0	13
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	12	1	0	0	0	0	13
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	8	1	0	0	0	0	9
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	19	1	0	0	0	0	20
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	13	0	0	0	0	0	13
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	9	1	0	0	0	0	10
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	13	0	0	0	0	0	13
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	14	0	0	0	0	0	14
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	0	0	0	0	0	7
2:30 AM - 2:45 AM	0	0	0	1	0	0	1	2:30 PM - 2:45 PM	9	0	0	0	0	0	9
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	8	2	0	0	0	0	10
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	6	0	0	0	0	0	6
3:15 AM - 3:30 AM	0	0	0	3	0	0	3	3:15 PM - 3:30 PM	7	0	0	0	0	0	7
3:30 AM - 3:45 AM	0	0	0	1	0	0	1	3:30 PM - 3:45 PM	16	1	0	0	0	0	17
3:45 AM - 4:00 AM	0	2	0	0	0	0	2	3:45 PM - 4:00 PM	12	0	0	0	0	0	12
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	9	0	0	0	0	0	9
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	4	0	0	0	0	0	4
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	6	0	0	0	0	0	6
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	10	0	0	0	0	0	10
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	9	1	0	0	0	0	10
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	1	0	0	0	0	10
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	13	0	0	0	0	0	13
5:45 AM - 6:00 AM	0	1	0	0	0	0	1	5:45 PM - 6:00 PM	8	1	0	0	0	0	9
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	11	0	0	0	0	0	11
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	6	0	0	0	0	0	6
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	1	0	0	0	0	0	1
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	10	0	0	0	0	0	10
7:00 AM - 7:15 AM	1	1	0	1	0	0	3	7:00 PM - 7:15 PM	7	0	0	0	0	0	7
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	11	0	0	0	0	0	11
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	9	0	0	0	0	0	9
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	4	0	0	0	0	0	4
8:00 AM - 8:15 AM	3	1	0	0	0	0	4	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	4	1	0	0	0	0	5	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	3	0	0	0	0	0	3	8:30 PM - 8:45 PM	3	1	0	0	0	0	4
8:45 AM - 9:00 AM	2	1	0	0	0	0	3	8:45 PM - 9:00 PM	1	0	0	0	0	0	1
9:00 AM - 9:15 AM	5	0	0	0	0	0	5	9:00 PM - 9:15 PM	2	0	0	0	0	0	2
9:15 AM - 9:30 AM	7	0	0	1	0	0	8	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	5	1	0	0	0	0	6	9:30 PM - 9:45 PM	1	0	0	1	0	0	2
9:45 AM - 10:00 AM	5	1	0	0	0	0	6	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	7	0	0	0	0	0	7	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	10	0	0	0	0	0	10	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	8	0	0	0	0	0	8	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	14	0	1	0	0	0	15	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	13	0	1	0	0	0	14	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	12	0	0	0	0	0	12	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	8	1	0	0	0	0	9	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	120	10	2	7	0	0	139	Total	328	11	0	1	0	0	340
								Total AM + PM	448	21	2	8	0	0	479

Table B-9
Driveway 5 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	10	0	0	0	0	0	10
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	7	1	0	0	0	0	8
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	8	0	0	0	0	0	8
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	2	0	0	0	0	0	2
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	7	1	0	0	0	0	8
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	5	1	0	0	0	0	6
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	5	0	0	0	0	0	5
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	7	0	0	0	0	0	7
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	1	0	0	1	0	9
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	12	0	0	0	0	0	12
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	9	0	0	0	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	1	0	0	0	0	9
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	10	0	0	0	0	0	10
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	11	0	0	0	0	0	11
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	8	0	0	0	0	0	8
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	8	0	0	0	0	0	8
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	5	0	0	0	0	0	5
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	9	0	0	0	0	0	9
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	21	0	0	0	0	0	21
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	12	0	0	0	0	0	12
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	0	0	0	0	0	9
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	2	0	0	0	0	0	2
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	7	0	0	0	0	0	7
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	6	0	0	0	0	0	6
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	6	1	0	0	0	0	7
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	5	0	0	0	0	0	5
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	10	0	0	0	0	0	10
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	8	0	0	0	0	0	8
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	5	0	0	0	0	0	5
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	8	0	0	0	0	0	8
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	1	0	0	0	0	0	1	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	3	0	0	0	0	0	3	8:30 PM - 8:45 PM	5	0	0	0	0	0	5
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	3	0	0	0	0	0	3
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	3	0	0	0	0	0	3
9:15 AM - 9:30 AM	1	0	0	0	0	0	1	9:15 PM - 9:30 PM	6	0	0	0	0	0	6
9:30 AM - 9:45 AM	4	0	0	0	0	0	4	9:30 PM - 9:45 PM	5	0	0	0	0	0	5
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	4	0	0	0	0	0	4
10:15 AM - 10:30 AM	6	0	0	0	0	0	6	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	6	0	0	0	0	0	6	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	7	0	0	0	0	0	7	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	10	0	0	0	0	0	10	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	5	0	0	0	0	0	5	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	10	0	0	0	0	0	10	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	10	0	0	0	0	0	10	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	86	0	0	0	0	0	86	Total	286	6	0	0	1	0	293
								Total AM + PM	372	6	0	0	1	0	379

Table B-10
Driveway 5 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	17	0	0	0	0	0	17
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	19	0	0	0	0	0	19
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	21	1	0	0	0	0	22
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	22	0	0	0	0	0	22
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	14	1	0	0	0	0	15
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	18	0	0	0	0	0	18
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	15	1	0	0	0	0	16
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	13	1	0	0	0	0	14
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	11	1	0	0	0	0	12
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	15	1	0	0	0	0	16
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	17	0	0	0	0	0	17
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	16	1	0	0	0	0	17
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	22	1	0	1	0	0	24
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	21	0	0	0	0	0	21
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	17	0	0	1	0	0	18
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	18	1	0	0	0	0	19
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	17	0	1	0	0	0	18
4:15 AM - 4:30 AM	2	0	0	0	0	0	2	4:15 PM - 4:30 PM	17	0	0	0	0	0	17
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	15	0	0	0	0	0	15
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	21	1	1	0	0	0	23
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	16	0	0	0	0	0	16
5:15 AM - 5:30 AM	1	0	0	0	0	0	1	5:15 PM - 5:30 PM	18	0	0	0	0	0	18
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	20	0	0	0	0	0	20
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	12	0	0	0	0	0	12
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	15	1	0	0	0	0	16
6:15 AM - 6:30 AM	0	1	0	0	0	0	1	6:15 PM - 6:30 PM	19	0	0	0	0	0	19
6:30 AM - 6:45 AM	0	2	0	0	0	0	2	6:30 PM - 6:45 PM	22	0	0	0	0	0	22
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	11	0	0	0	0	0	11
7:00 AM - 7:15 AM	2	0	0	0	0	0	2	7:00 PM - 7:15 PM	19	0	0	0	0	0	19
7:15 AM - 7:30 AM	1	0	0	0	0	0	1	7:15 PM - 7:30 PM	17	0	0	0	0	0	17
7:30 AM - 7:45 AM	2	0	0	0	0	0	2	7:30 PM - 7:45 PM	10	0	0	0	0	0	10
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	15	0	0	0	0	0	15
8:00 AM - 8:15 AM	3	1	0	0	0	0	4	8:00 PM - 8:15 PM	12	0	0	0	0	0	12
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	12	0	0	0	0	0	12
8:30 AM - 8:45 AM	3	1	0	0	0	0	4	8:30 PM - 8:45 PM	13	0	0	0	0	0	13
8:45 AM - 9:00 AM	5	0	0	0	0	0	5	8:45 PM - 9:00 PM	10	0	0	0	0	0	10
9:00 AM - 9:15 AM	4	1	0	0	0	0	5	9:00 PM - 9:15 PM	7	0	0	0	0	0	7
9:15 AM - 9:30 AM	6	1	0	2	0	0	9	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	8	0	0	0	0	0	8	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	11	1	0	0	0	0	12	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	14	0	0	0	0	0	14	10:00 PM - 10:15 PM	13	0	0	0	0	0	13
10:15 AM - 10:30 AM	3	2	0	0	0	0	5	10:15 PM - 10:30 PM	5	0	0	1	0	0	6
10:30 AM - 10:45 AM	12	1	0	0	0	0	13	10:30 PM - 10:45 PM	5	0	0	1	0	0	6
10:45 AM - 11:00 AM	15	0	1	1	0	0	17	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	20	2	0	0	0	0	22	11:00 PM - 11:15 PM	4	0	0	0	0	0	4
11:15 AM - 11:30 AM	10	0	0	0	0	0	10	11:15 PM - 11:30 PM	7	0	0	0	0	0	7
11:30 AM - 11:45 AM	16	0	0	1	0	1	18	11:30 PM - 11:45 PM	2	0	0	1	0	0	3
11:45 AM - 12:00 PM	13	0	0	3	0	0	16	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	167	13	1	7	0	1	189	Total	647	11	2	5	0	0	665
								Total AM + PM	814	24	3	12	0	1	854

Table B-11
Driveway 6 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	7	0	1	0	0	0	8
12:15 AM - 12:30 AM	2	0	0	0	0	0	2	12:15 PM - 12:30 PM	4	0	0	0	0	0	4
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	3	0	0	0	0	0	3
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	9	0	0	0	0	0	9
1:15 AM - 1:30 AM	4	0	0	0	0	0	4	1:15 PM - 1:30 PM	11	1	0	0	0	0	12
1:30 AM - 1:45 AM	1	0	0	0	0	0	1	1:30 PM - 1:45 PM	5	0	0	0	0	0	5
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	6	1	1	0	0	0	8
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	5	1	0	0	0	0	6
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	3	1	0	0	0	0	4
2:30 AM - 2:45 AM	5	0	0	0	0	0	5	2:30 PM - 2:45 PM	8	1	0	0	0	0	9
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	2	0	0	0	0	0	2	3:00 PM - 3:15 PM	4	0	0	0	0	0	4
3:15 AM - 3:30 AM	5	0	0	0	0	0	5	3:15 PM - 3:30 PM	6	0	0	0	0	0	6
3:30 AM - 3:45 AM	4	0	0	0	0	0	4	3:30 PM - 3:45 PM	7	1	0	0	0	0	8
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	6	0	0	0	0	0	6
4:00 AM - 4:15 AM	5	0	0	0	0	0	5	4:00 PM - 4:15 PM	10	0	0	0	0	0	10
4:15 AM - 4:30 AM	4	0	0	0	0	0	4	4:15 PM - 4:30 PM	6	0	0	0	0	0	6
4:30 AM - 4:45 AM	8	3	0	0	0	0	11	4:30 PM - 4:45 PM	9	0	0	0	0	0	9
4:45 AM - 5:00 AM	7	0	0	0	0	0	7	4:45 PM - 5:00 PM	9	0	0	0	0	0	9
5:00 AM - 5:15 AM	4	2	0	0	0	0	6	5:00 PM - 5:15 PM	8	0	0	0	0	0	8
5:15 AM - 5:30 AM	4	2	0	0	0	0	6	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	3	0	0	0	0	0	3	5:30 PM - 5:45 PM	9	0	0	0	0	0	9
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	5	0	0	0	0	0	5
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	4	0	0	0	0	0	4
6:15 AM - 6:30 AM	6	1	0	0	0	0	7	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	4	0	0	0	0	0	4	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	4	1	0	0	0	0	5	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	7	0	0	0	0	0	7	7:00 PM - 7:15 PM	4	1	0	0	0	0	5
7:15 AM - 7:30 AM	5	0	0	1	0	0	6	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	5	0	0	0	0	0	5	7:30 PM - 7:45 PM	10	0	0	0	0	0	10
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	4	2	0	0	0	0	6	8:00 PM - 8:15 PM	4	0	0	0	0	0	4
8:15 AM - 8:30 AM	7	0	0	0	0	0	7	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	7	0	0	0	0	0	7	8:30 PM - 8:45 PM	1	0	0	1	0	0	2
8:45 AM - 9:00 AM	5	0	0	0	0	0	5	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	7	0	1	0	0	0	8	9:00 PM - 9:15 PM	8	0	1	0	0	0	9
9:15 AM - 9:30 AM	8	0	0	0	0	0	8	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	6	1	0	0	0	0	7	9:30 PM - 9:45 PM	0	0	0	0	0	0	0
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	3	0	0	0	0	0	3
10:15 AM - 10:30 AM	2	0	0	0	0	0	2	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	4	0	0	0	0	0	4	10:45 PM - 11:00 PM	2	0	0	0	0	0	2
11:00 AM - 11:15 AM	7	0	0	0	0	0	7	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	6	0	0	0	0	0	6	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	3	0	0	0	0	0	3	11:30 PM - 11:45 PM	3	1	0	0	0	0	4
11:45 AM - 12:00 PM	5	1	0	0	0	0	6	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	192	13	1	1	0	0	207	Total	243	8	3	1	0	0	255
								Total AM + PM	435	21	4	2	0	0	462

Table B-12
Driveway 6 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	2	0	0	0	0	0	2	12:00 PM - 12:15 PM	3	0	0	0	0	0	3
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	6	0	0	0	0	0	6
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	1	0	0	1	0	0	2
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	5	0	0	0	0	0	5
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	7	0	0	0	0	0	7
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	14	0	0	0	0	0	14
1:30 AM - 1:45 AM	2	0	0	0	0	0	2	1:30 PM - 1:45 PM	4	0	0	0	1	0	5
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	4	0	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	5	0	0	0	0	0	5
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	7	0	0	0	0	0	7
2:45 AM - 3:00 AM	3	0	0	0	0	0	3	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	3	0	0	0	0	0	3	3:00 PM - 3:15 PM	10	0	0	0	0	0	10
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	5	0	0	0	0	0	5	3:30 PM - 3:45 PM	5	0	0	0	0	0	5
3:45 AM - 4:00 AM	1	1	0	0	0	0	2	3:45 PM - 4:00 PM	4	0	0	0	0	0	4
4:00 AM - 4:15 AM	2	0	0	0	0	0	2	4:00 PM - 4:15 PM	5	0	0	0	0	0	5
4:15 AM - 4:30 AM	4	0	0	0	0	0	4	4:15 PM - 4:30 PM	6	1	0	0	0	0	7
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	5	0	0	0	0	0	5
4:45 AM - 5:00 AM	8	0	0	0	0	0	8	4:45 PM - 5:00 PM	9	1	0	0	0	0	10
5:00 AM - 5:15 AM	3	1	0	0	0	0	4	5:00 PM - 5:15 PM	9	0	0	0	0	0	9
5:15 AM - 5:30 AM	3	0	0	0	0	0	3	5:15 PM - 5:30 PM	4	0	0	0	0	0	4
5:30 AM - 5:45 AM	7	1	0	0	0	0	8	5:30 PM - 5:45 PM	8	0	0	0	0	0	8
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	11	0	0	0	0	0	11
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	8	1	0	0	0	0	9
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	3	0	0	0	0	0	3
6:30 AM - 6:45 AM	2	2	0	0	0	0	4	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	4	1	0	0	0	0	5	6:45 PM - 7:00 PM	4	0	0	0	0	0	4
7:00 AM - 7:15 AM	5	0	0	0	0	0	5	7:00 PM - 7:15 PM	4	1	0	0	0	0	5
7:15 AM - 7:30 AM	5	0	0	1	0	0	6	7:15 PM - 7:30 PM	2	0	0	0	0	0	2
7:30 AM - 7:45 AM	7	0	0	0	0	0	7	7:30 PM - 7:45 PM	6	0	0	0	0	0	6
7:45 AM - 8:00 AM	1	2	0	0	0	0	3	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	1	0	0	0	0	0	1	8:00 PM - 8:15 PM	4	1	0	0	0	0	5
8:15 AM - 8:30 AM	4	0	0	0	0	0	4	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	7	0	0	0	0	0	7	8:30 PM - 8:45 PM	5	0	0	0	0	0	5
8:45 AM - 9:00 AM	3	0	0	0	0	0	3	8:45 PM - 9:00 PM	6	0	0	0	0	0	6
9:00 AM - 9:15 AM	6	1	1	0	0	0	8	9:00 PM - 9:15 PM	6	0	0	0	0	0	6
9:15 AM - 9:30 AM	5	0	0	0	0	0	5	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	7	0	0	0	0	0	7	9:30 PM - 9:45 PM	4	0	0	0	0	0	4
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	2	0	0	0	0	0	2
10:00 AM - 10:15 AM	6	0	0	0	0	0	6	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	4	0	0	0	0	0	4	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	3	0	0	0	0	0	3	10:30 PM - 10:45 PM	2	0	0	0	0	0	2
10:45 AM - 11:00 AM	5	0	1	0	0	0	6	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	4	0	0	0	0	0	4	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	4	0	0	0	0	0	4	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	6	0	0	0	0	0	6	11:30 PM - 11:45 PM	2	1	0	0	0	0	3
11:45 AM - 12:00 PM	3	1	0	0	0	0	4	11:45 PM - 12:00 AM	3	0	0	0	0	0	3
Total	157	10	2	1	0	0	170	Total	230	6	0	1	1	0	238
								Total AM + PM	387	16	2	2	1	0	408

Table B-13
Driveway 7 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	6	0	0	0	0	0	6
12:15 AM - 12:30 AM	2	0	0	0	0	0	2	12:15 PM - 12:30 PM	8	0	0	0	0	0	8
12:30 AM - 12:45 AM	2	1	0	0	0	0	3	12:30 PM - 12:45 PM	3	0	0	0	0	0	3
12:45 AM - 1:00 AM	3	0	0	0	0	0	3	12:45 PM - 1:00 PM	4	0	0	0	0	0	4
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	5	0	0	0	0	0	5
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	6	0	0	0	0	0	6
1:30 AM - 1:45 AM	2	0	0	0	0	0	2	1:30 PM - 1:45 PM	4	0	0	0	0	0	4
1:45 AM - 2:00 AM	1	1	0	0	0	0	2	1:45 PM - 2:00 PM	0	0	0	0	0	0	0
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	4	0	0	0	0	0	4
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	0	0	0	0	0	7
2:30 AM - 2:45 AM	1	0	0	0	0	0	1	2:30 PM - 2:45 PM	2	0	0	0	0	0	2
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	2	0	0	0	0	0	2
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	10	1	0	0	0	0	11
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	6	0	0	0	0	0	6
3:30 AM - 3:45 AM	3	0	0	0	0	0	3	3:30 PM - 3:45 PM	5	0	0	0	0	0	5
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	4	1	0	0	0	0	5
4:00 AM - 4:15 AM	3	0	0	0	0	0	3	4:00 PM - 4:15 PM	4	1	0	0	0	0	5
4:15 AM - 4:30 AM	3	1	0	0	0	0	4	4:15 PM - 4:30 PM	1	0	0	0	0	0	1
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	1	0	0	0	0	0	1
4:45 AM - 5:00 AM	5	0	0	0	0	0	5	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	5	0	0	0	0	0	5
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	7	0	0	0	0	0	7
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	4	0	0	0	0	0	4
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	5	1	0	0	0	0	6
6:15 AM - 6:30 AM	0	1	0	0	0	0	1	6:15 PM - 6:30 PM	4	0	0	0	0	0	4
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	9	0	0	0	0	0	9
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	3	0	0	0	0	0	3
7:00 AM - 7:15 AM	4	1	0	0	0	0	5	7:00 PM - 7:15 PM	6	0	0	0	0	0	6
7:15 AM - 7:30 AM	6	0	0	0	0	0	6	7:15 PM - 7:30 PM	4	0	0	0	0	0	4
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	3	0	0	0	0	0	3
7:45 AM - 8:00 AM	2	0	0	0	0	0	2	7:45 PM - 8:00 PM	1	0	0	0	0	0	1
8:00 AM - 8:15 AM	2	0	0	0	0	0	2	8:00 PM - 8:15 PM	7	1	0	0	0	0	8
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	2	0	0	0	0	0	2	8:30 PM - 8:45 PM	5	0	0	0	0	0	5
8:45 AM - 9:00 AM	3	0	0	0	0	0	3	8:45 PM - 9:00 PM	3	0	0	0	0	0	3
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	3	0	0	0	0	0	3
9:15 AM - 9:30 AM	7	0	0	0	0	0	7	9:15 PM - 9:30 PM	6	0	0	0	0	0	6
9:30 AM - 9:45 AM	4	0	0	0	0	0	4	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	6	0	0	0	0	0	6
10:00 AM - 10:15 AM	4	0	0	0	0	0	4	10:00 PM - 10:15 PM	5	0	0	0	0	0	5
10:15 AM - 10:30 AM	6	0	0	0	0	0	6	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	6	1	0	0	0	0	7	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	5	0	0	0	0	0	5	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	5	0	0	0	0	0	5	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	6	0	1	0	0	0	7	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	5	0	0	0	0	0	5	11:30 PM - 11:45 PM	2	0	0	0	0	0	2
11:45 AM - 12:00 PM	7	0	0	0	0	0	7	11:45 PM - 12:00 AM	0	1	0	0	0	0	1
Total	126	6	1	0	0	0	133	Total	201	6	0	0	0	0	207
								Total AM + PM	327	12	1	0	0	0	340

Table B-14
Driveway 7 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	0	0	0	0	0	0	0
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	0	0	0	0	0	0	0
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	0	0	0	0	0	0	0
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	0	0	0	0	0	0	0
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	0	0	0	0	0	0	0
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	0	0	0	0	0	0	0
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	0	0	0	0	0	0	0
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	0	0	0	0	0	0	0
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	0	0	0	0	0	0	0
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	0	0	0	0	0	0	0
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	0	0	0	0	0	0	0
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	0	0	0	0	0	0	0
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	0	0	0	0	0	0	0
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	0	0	0	0	0	0	0
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	0	0	0	0	0	0	0
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	0	0	0	0	0	0	0
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	0	0	0	0	0	0	0
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	0	0	0	0	0	0	0
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	1	0	0	0	0	0	1
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	0	0	0	0	0	0	0
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	0	0	0	0	0	0	0
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	0	0	0	0	0	0	0
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	0	0	0	0	0	0	0
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	0	0	0	0	0	0	0
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	0	0	0	0	0	0	0
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	0	0	0	0	0	0	0
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	0	0	0	0	0	0	0
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	0	0	0	0	0	0	0
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	0	0	0	0	0	0	0
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	0	0	0	0	0	0	0
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	0	0	0	0	0	0	0
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	0	0	0	0	0	0	0
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	0	0	0	0	0	0	0
8:15 AM - 8:30 AM	0	0	0	0	0	0	0	8:15 PM - 8:30 PM	0	0	0	0	0	0	0
8:30 AM - 8:45 AM	0	0	0	0	0	0	0	8:30 PM - 8:45 PM	0	0	0	0	0	0	0
8:45 AM - 9:00 AM	0	0	0	0	0	0	0	8:45 PM - 9:00 PM	0	0	0	0	0	0	0
9:00 AM - 9:15 AM	0	0	0	0	0	0	0	9:00 PM - 9:15 PM	0	0	0	0	0	0	0
9:15 AM - 9:30 AM	0	0	0	0	0	0	0	9:15 PM - 9:30 PM	0	0	0	0	0	0	0
9:30 AM - 9:45 AM	0	0	0	0	0	0	0	9:30 PM - 9:45 PM	0	0	0	0	0	0	0
9:45 AM - 10:00 AM	0	0	0	0	0	0	0	9:45 PM - 10:00 PM	0	0	0	0	0	0	0
10:00 AM - 10:15 AM	0	0	0	0	0	0	0	10:00 PM - 10:15 PM	0	0	0	0	0	0	0
10:15 AM - 10:30 AM	0	0	0	0	0	0	0	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	0	0	0	0	0	0	0	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	0	0	0	0	0	0	0	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	0	0	0	0	0	0	0	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	0	0	0	0	0	0	0	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	0	0	0	0	0	0	0	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	0	0	0	0	0	0	0	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	Total	4	0	0	0	0	0	4
								Total AM + PM	4	0	0	0	0	0	4

Table B-15
Driveway 8 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	2	0	0	0	0	0	2	12:00 PM - 12:15 PM	14	0	0	1	0	0	15
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	12	0	0	0	0	0	12
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	12	0	0	0	0	0	12
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	11	0	0	1	0	0	12
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	5	0	0	0	0	0	5
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	11	1	0	0	1	1	14
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	4	1	0	1	0	0	6
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	8	1	0	0	0	0	9
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	4	1	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	7	0	0	0	0	0	7
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	15	0	0	0	0	0	15
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	0	0	0	0	7
3:00 AM - 3:15 AM	3	0	0	0	0	0	3	3:00 PM - 3:15 PM	16	0	0	0	0	0	16
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	11	0	0	0	0	0	11
3:30 AM - 3:45 AM	1	2	0	0	0	0	3	3:30 PM - 3:45 PM	15	0	0	0	0	0	15
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	15	0	0	0	0	0	15
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	12	0	0	0	0	0	12
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	9	1	0	0	0	0	10
4:45 AM - 5:00 AM	4	0	0	0	0	0	4	4:45 PM - 5:00 PM	6	0	0	0	0	0	6
5:00 AM - 5:15 AM	2	0	0	0	0	0	2	5:00 PM - 5:15 PM	7	0	0	0	0	0	7
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	17	1	0	0	0	0	18
5:30 AM - 5:45 AM	1	1	0	0	0	0	2	5:30 PM - 5:45 PM	12	0	0	0	0	0	12
5:45 AM - 6:00 AM	4	0	0	0	0	0	4	5:45 PM - 6:00 PM	9	1	0	0	0	0	10
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	12	0	0	0	0	0	12
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	15	0	0	0	0	0	15
6:30 AM - 6:45 AM	2	1	0	0	0	0	3	6:30 PM - 6:45 PM	9	0	0	0	0	0	9
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	17	0	0	0	0	0	17
7:00 AM - 7:15 AM	4	0	0	0	0	0	4	7:00 PM - 7:15 PM	16	0	0	0	0	0	16
7:15 AM - 7:30 AM	5	0	0	0	0	0	5	7:15 PM - 7:30 PM	10	0	0	0	0	0	10
7:30 AM - 7:45 AM	6	1	1	0	0	0	8	7:30 PM - 7:45 PM	12	0	0	0	0	0	12
7:45 AM - 8:00 AM	3	2	0	0	0	0	5	7:45 PM - 8:00 PM	7	0	0	0	0	0	7
8:00 AM - 8:15 AM	3	0	0	1	0	0	4	8:00 PM - 8:15 PM	7	0	0	0	0	0	7
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	11	0	0	0	0	0	11
8:30 AM - 8:45 AM	7	0	0	1	0	0	8	8:30 PM - 8:45 PM	4	0	0	0	0	0	4
8:45 AM - 9:00 AM	7	2	1	0	0	0	10	8:45 PM - 9:00 PM	6	0	0	0	0	0	6
9:00 AM - 9:15 AM	6	0	0	0	0	0	6	9:00 PM - 9:15 PM	8	0	0	0	0	0	8
9:15 AM - 9:30 AM	7	1	0	0	0	0	8	9:15 PM - 9:30 PM	18	0	0	0	0	0	18
9:30 AM - 9:45 AM	9	0	0	0	0	0	9	9:30 PM - 9:45 PM	14	0	0	0	0	0	14
9:45 AM - 10:00 AM	8	0	0	0	0	0	8	9:45 PM - 10:00 PM	4	1	0	0	0	0	5
10:00 AM - 10:15 AM	9	0	0	0	0	0	9	10:00 PM - 10:15 PM	9	0	0	0	0	0	9
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	4	0	0	0	0	0	4	10:30 PM - 10:45 PM	9	0	0	0	0	0	9
10:45 AM - 11:00 AM	5	1	0	1	0	0	7	10:45 PM - 11:00 PM	5	0	0	0	0	0	5
11:00 AM - 11:15 AM	7	0	0	0	0	0	7	11:00 PM - 11:15 PM	1	0	0	1	0	0	2
11:15 AM - 11:30 AM	10	0	0	0	0	0	10	11:15 PM - 11:30 PM	4	0	0	0	0	0	4
11:30 AM - 11:45 AM	6	1	0	0	0	0	7	11:30 PM - 11:45 PM	1	1	0	0	0	0	2
11:45 AM - 12:00 PM	15	0	0	1	0	0	16	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	162	12	2	4	0	0	180	Total	452	9	0	4	1	1	467
								Total AM + PM	614	21	2	8	1	1	647

Table B-16
Driveway 8 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	6	0	0	0	0	0	6	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	5	0	0	0	0	0	5	12:15 PM - 12:30 PM	5	0	0	0	0	0	5
12:30 AM - 12:45 AM	2	1	0	0	0	0	3	12:30 PM - 12:45 PM	9	0	0	0	0	0	9
12:45 AM - 1:00 AM	5	0	0	0	0	0	5	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	1	0	0	0	0	0	1
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	6	0	0	0	0	0	6
1:30 AM - 1:45 AM	4	0	0	0	0	0	4	1:30 PM - 1:45 PM	5	0	0	0	0	0	5
1:45 AM - 2:00 AM	2	0	0	0	0	0	2	1:45 PM - 2:00 PM	3	0	0	0	0	0	3
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	7	4	1	0	0	0	12
2:15 AM - 2:30 AM	3	0	0	0	0	0	3	2:15 PM - 2:30 PM	7	1	0	0	0	0	8
2:30 AM - 2:45 AM	2	0	0	0	0	0	2	2:30 PM - 2:45 PM	5	0	0	0	0	0	5
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	7	1	0	0	0	0	8
3:15 AM - 3:30 AM	2	0	0	0	0	0	2	3:15 PM - 3:30 PM	6	0	0	0	0	0	6
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	10	0	0	0	0	0	10
3:45 AM - 4:00 AM	4	0	0	0	0	0	4	3:45 PM - 4:00 PM	6	0	0	0	0	0	6
4:00 AM - 4:15 AM	4	0	0	0	0	0	4	4:00 PM - 4:15 PM	7	0	0	0	0	0	7
4:15 AM - 4:30 AM	4	2	0	0	0	0	6	4:15 PM - 4:30 PM	7	0	0	0	0	0	7
4:30 AM - 4:45 AM	2	4	0	0	0	0	6	4:30 PM - 4:45 PM	6	0	0	0	0	0	6
4:45 AM - 5:00 AM	6	0	0	0	0	0	6	4:45 PM - 5:00 PM	5	0	0	0	0	0	5
5:00 AM - 5:15 AM	3	0	0	0	0	0	3	5:00 PM - 5:15 PM	4	0	0	0	0	0	4
5:15 AM - 5:30 AM	0	2	0	0	0	0	2	5:15 PM - 5:30 PM	7	0	0	0	0	0	7
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	1	1	0	0	0	0	2	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	3	1	0	0	0	0	4	6:00 PM - 6:15 PM	9	0	0	0	0	0	9
6:15 AM - 6:30 AM	6	0	0	0	0	0	6	6:15 PM - 6:30 PM	9	0	0	0	0	0	9
6:30 AM - 6:45 AM	4	0	0	0	0	0	4	6:30 PM - 6:45 PM	11	0	0	0	0	0	11
6:45 AM - 7:00 AM	3	0	0	0	0	0	3	6:45 PM - 7:00 PM	8	0	0	0	0	0	8
7:00 AM - 7:15 AM	2	1	0	0	0	0	3	7:00 PM - 7:15 PM	7	0	0	0	0	0	7
7:15 AM - 7:30 AM	4	1	0	0	0	0	5	7:15 PM - 7:30 PM	8	0	1	0	0	0	9
7:30 AM - 7:45 AM	5	0	0	0	0	0	5	7:30 PM - 7:45 PM	10	0	0	0	0	0	10
7:45 AM - 8:00 AM	3	0	1	0	0	0	4	7:45 PM - 8:00 PM	5	0	0	0	0	0	5
8:00 AM - 8:15 AM	2	3	0	1	0	0	6	8:00 PM - 8:15 PM	11	0	0	0	0	0	11
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	9	0	0	0	0	0	9
8:30 AM - 8:45 AM	4	0	0	0	0	0	4	8:30 PM - 8:45 PM	3	0	0	1	0	0	4
8:45 AM - 9:00 AM	5	0	0	0	0	0	5	8:45 PM - 9:00 PM	4	0	0	0	0	0	4
9:00 AM - 9:15 AM	2	1	1	0	0	0	4	9:00 PM - 9:15 PM	12	0	0	0	0	0	12
9:15 AM - 9:30 AM	9	0	0	0	0	0	9	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	10	1	0	0	0	0	11	9:30 PM - 9:45 PM	12	0	0	0	0	0	12
9:45 AM - 10:00 AM	5	0	0	0	0	0	5	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	9	0	0	0	0	0	9
10:15 AM - 10:30 AM	2	0	0	0	0	0	2	10:15 PM - 10:30 PM	7	0	0	0	0	0	7
10:30 AM - 10:45 AM	6	0	0	0	0	0	6	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	9	1	0	0	0	0	10	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	6	0	0	0	0	0	6	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	8	0	0	0	0	0	8	11:15 PM - 11:30 PM	3	0	0	0	0	0	3
11:30 AM - 11:45 AM	2	0	1	0	0	0	3	11:30 PM - 11:45 PM	4	0	0	0	0	0	4
11:45 AM - 12:00 PM	6	0	0	0	0	0	6	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	175	19	3	1	0	0	198	Total	314	6	2	1	0	0	323
								Total AM + PM	489	25	5	2	0	0	521

Table B-17
Driveway 9 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	4	0	0	0	0	0	4
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	5	0	0	0	0	0	5
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	3	0	0	0	0	0	3
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	4	0	0	0	0	0	4
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	3	0	0	0	0	0	3
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	6	0	0	1	0	0	7
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	2	1	0	0	0	0	3
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	4	0	0	0	0	0	4
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	7	0	0	0	0	0	7
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	9	1	0	0	0	0	10
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	8	0	0	0	0	0	8
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	7	0	0	0	0	0	7
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	8	0	0	0	0	0	8
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	4	0	0	0	0	0	4
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	9	0	0	1	0	0	10
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	5	0	0	0	0	0	5
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	10	0	0	0	0	0	10
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	0	0	1	0	0	10
5:30 AM - 5:45 AM	0	1	0	0	0	0	1	5:30 PM - 5:45 PM	4	0	0	0	0	0	4
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	5	0	0	0	0	0	5
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	6	0	0	0	0	0	6
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	6	0	0	0	0	0	6
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	2	0	0	0	0	0	2
6:45 AM - 7:00 AM	2	0	0	0	0	0	2	6:45 PM - 7:00 PM	3	0	0	0	0	0	3
7:00 AM - 7:15 AM	3	0	0	0	0	0	3	7:00 PM - 7:15 PM	2	0	0	0	0	0	2
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	3	0	0	0	0	0	3
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	2	0	0	0	0	0	2	8:00 PM - 8:15 PM	5	1	0	0	0	0	6
8:15 AM - 8:30 AM	3	0	0	0	0	0	3	8:15 PM - 8:30 PM	2	0	0	0	0	0	2
8:30 AM - 8:45 AM	4	0	0	0	0	0	4	8:30 PM - 8:45 PM	2	0	0	0	0	0	2
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	2	0	0	0	0	0	2
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	3	0	0	0	0	0	3
9:15 AM - 9:30 AM	5	0	0	0	0	0	5	9:15 PM - 9:30 PM	0	0	0	0	0	0	0
9:30 AM - 9:45 AM	2	0	0	0	0	0	2	9:30 PM - 9:45 PM	3	0	0	0	0	0	3
9:45 AM - 10:00 AM	9	0	0	0	0	0	9	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	4	0	0	0	0	0	4	10:00 PM - 10:15 PM	2	0	0	0	0	0	2
10:15 AM - 10:30 AM	6	0	0	0	0	0	6	10:15 PM - 10:30 PM	2	0	0	0	0	0	2
10:30 AM - 10:45 AM	9	0	0	0	0	0	9	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	6	0	0	0	0	0	6	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	5	0	0	0	0	0	5	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	7	0	0	0	0	0	7	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	5	0	1	0	0	0	6	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	6	0	0	0	0	0	6	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	89	1	1	0	0	0	91	Total	201	3	0	3	0	0	207
								Total AM + PM	290	4	1	3	0	0	298

Table B-18
Driveway 9 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	5	0	0	0	0	0	5
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	5	0	0	0	0	0	5
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	8	0	0	0	0	0	8
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	7	0	0	0	0	0	7
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	6	0	0	0	0	0	6
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	4	0	0	0	0	0	4
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	5	0	0	0	0	0	5
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	6	1	0	0	0	0	7
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	0	0	0	6
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	5	1	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	5	0	0	0	0	0	5
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	4	0	0	0	0	0	4
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	2	0	0	0	0	0	2
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	4	0	0	0	0	0	4
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	3	1	0	0	0	0	4
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	3	0	0	0	0	0	3
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	4	0	0	0	0	0	4
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	3	1	0	0	0	0	4
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	0	0	0	0	0	0	0
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	5	0	0	0	0	0	5
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	7	0	0	0	0	0	7
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	7	0	0	0	0	0	7
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	10	0	0	0	0	0	10
6:00 AM - 6:15 AM	0	0	0	0	0	0	0	6:00 PM - 6:15 PM	2	0	0	0	0	0	2
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	4	0	0	0	0	0	4
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	10	0	0	0	0	0	10
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	3	0	0	0	0	0	3
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	3	0	0	0	0	0	3
7:30 AM - 7:45 AM	0	0	0	1	0	0	1	7:30 PM - 7:45 PM	2	0	0	0	0	0	2
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	4	0	0	0	0	0	4
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	1	0	0	0	0	0	1
8:15 AM - 8:30 AM	1	1	0	0	0	0	2	8:15 PM - 8:30 PM	3	0	0	0	0	0	3
8:30 AM - 8:45 AM	1	0	0	0	0	0	1	8:30 PM - 8:45 PM	7	0	0	0	0	0	7
8:45 AM - 9:00 AM	2	0	0	0	0	0	2	8:45 PM - 9:00 PM	1	0	0	0	0	0	1
9:00 AM - 9:15 AM	3	0	0	0	0	0	3	9:00 PM - 9:15 PM	4	0	0	0	0	0	4
9:15 AM - 9:30 AM	2	0	0	0	0	0	2	9:15 PM - 9:30 PM	3	0	0	0	0	0	3
9:30 AM - 9:45 AM	0	0	0	0	0	0	0	9:30 PM - 9:45 PM	2	0	0	0	0	0	2
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	3	1	0	0	0	0	4	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	1	0	0	0	0	0	1	10:15 PM - 10:30 PM	5	0	0	0	0	0	5
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	2	0	0	0	0	0	2	10:45 PM - 11:00 PM	2	0	0	0	0	0	2
11:00 AM - 11:15 AM	6	0	0	0	0	0	6	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	1	0	0	0	0	0	1	11:15 PM - 11:30 PM	1	1	0	0	0	0	2
11:30 AM - 11:45 AM	7	0	0	0	0	0	7	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	2	0	0	0	0	0	2	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	51	2	0	1	0	0	54	Total	196	5	0	0	0	0	201
								Total AM + PM	247	7	0	1	0	0	255

Table B-19
Driveway 10 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	11	0	0	0	0	0	11
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	11	0	0	0	0	0	11
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	15	0	0	0	0	0	15
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	4	0	0	0	0	0	4
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	7	1	0	0	0	0	8
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	8	0	0	0	0	0	8
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	5	1	0	0	0	0	6
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	10	0	0	0	0	0	10
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	8	1	0	0	0	0	9
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	6	0	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	6	0	0	0	0	0	6
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	8	0	0	0	0	0	8
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	0	0	0	0	0	8
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	10	0	0	0	0	0	10
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	14	0	0	0	0	0	14
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	13	0	0	0	0	0	13
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	7	0	0	0	0	0	7
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	9	0	0	0	0	0	9
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	10	0	0	0	0	0	10
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	10	0	0	0	0	0	10
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	5	0	0	0	0	0	5
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	15	0	0	0	0	0	15
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	9	1	0	0	0	0	10
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	4	0	0	0	0	0	4
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	5	0	0	1	0	0	6
7:00 AM - 7:15 AM	0	0	0	1	0	0	1	7:00 PM - 7:15 PM	8	0	0	0	0	0	8
7:15 AM - 7:30 AM	1	0	0	1	0	0	2	7:15 PM - 7:30 PM	8	0	0	0	0	0	8
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	5	0	0	0	0	0	5
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	10	0	0	0	0	0	10
8:00 AM - 8:15 AM	4	0	0	0	0	0	4	8:00 PM - 8:15 PM	5	0	0	0	0	0	5
8:15 AM - 8:30 AM	2	0	0	0	0	0	2	8:15 PM - 8:30 PM	9	0	0	0	0	0	9
8:30 AM - 8:45 AM	2	0	0	0	0	0	2	8:30 PM - 8:45 PM	7	0	0	0	0	0	7
8:45 AM - 9:00 AM	3	0	0	0	0	0	3	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	7	1	0	0	0	0	8	9:00 PM - 9:15 PM	5	0	0	0	0	0	5
9:15 AM - 9:30 AM	3	0	0	0	0	0	3	9:15 PM - 9:30 PM	3	0	0	0	0	0	3
9:30 AM - 9:45 AM	3	0	0	0	0	0	3	9:30 PM - 9:45 PM	2	0	0	0	0	0	2
9:45 AM - 10:00 AM	6	1	0	0	0	0	7	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	4	1	0	0	0	0	5	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	3	0	0	1	0	0	4	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	5	0	0	0	0	0	5	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	7	0	0	0	0	0	7	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	8	0	0	0	0	0	8	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	12	0	0	0	0	0	12	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	5	0	0	1	0	0	6	11:45 PM - 12:00 AM	0	1	0	0	0	0	1
Total	88	3	0	4	0	0	95	Total	314	5	0	1	0	0	320
								Total AM + PM	402	8	0	5	0	0	415

Table B-20
Driveway 10 (Tuesday, August 15, 2023) - Outbound

Oubound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	3	1	1	0	0	0	5
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	2	1	0	0	0	0	3
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	9	0	0	0	0	0	9
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	8	1	0	0	0	0	9
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	7	0	0	0	0	0	7
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	8	2	0	0	0	0	10
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	12	0	0	0	0	0	12
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	5	0	0	0	0	0	5
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	4	1	0	0	0	0	5
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	4	0	0	0	0	0	4
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	8	1	0	0	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	5	0	0	0	0	0	5
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	9	0	1	0	0	0	10
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	5	1	0	0	0	0	6
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	6	0	0	0	0	0	6
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	11	0	0	0	0	0	11
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	7	0	0	0	0	0	7
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	8	0	0	0	0	0	8
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	4	0	0	0	0	0	4
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	8	0	0	0	0	0	8
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	8	0	0	0	0	0	8
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	5	0	0	0	0	0	5
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	7	0	0	0	0	0	7
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	3	0	0	0	0	0	3
6:45 AM - 7:00 AM	2	0	0	0	0	0	2	6:45 PM - 7:00 PM	10	0	0	0	0	0	10
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	4	0	0	0	0	0	4
7:15 AM - 7:30 AM	0	1	0	0	0	0	1	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	1	0	0	0	0	0	1	7:30 PM - 7:45 PM	4	0	0	0	0	0	4
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	5	1	0	0	0	0	6
8:00 AM - 8:15 AM	2	0	0	0	0	0	2	8:00 PM - 8:15 PM	6	0	0	0	0	0	6
8:15 AM - 8:30 AM	1	0	0	0	0	0	1	8:15 PM - 8:30 PM	4	0	0	0	0	0	4
8:30 AM - 8:45 AM	2	0	0	0	0	0	2	8:30 PM - 8:45 PM	4	0	0	0	0	0	4
8:45 AM - 9:00 AM	1	0	0	0	0	0	1	8:45 PM - 9:00 PM	8	0	0	0	0	0	8
9:00 AM - 9:15 AM	1	0	0	0	0	0	1	9:00 PM - 9:15 PM	5	0	0	0	0	0	5
9:15 AM - 9:30 AM	2	0	0	0	0	0	2	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	2	0	0	0	0	0	2	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	4	0	0	0	0	0	4	9:45 PM - 10:00 PM	2	0	0	0	0	0	2
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	4	0	0	0	0	0	4	10:15 PM - 10:30 PM	1	0	0	0	0	0	1
10:30 AM - 10:45 AM	3	0	0	0	0	0	3	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	2	0	0	0	0	0	2	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	9	0	0	0	0	0	9	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	8	1	0	0	0	0	9	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	4	0	0	0	0	0	4	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	5	0	0	0	0	0	5	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	59	2	0	0	0	0	61	Total	246	9	2	0	0	0	257
								Total AM + PM	305	11	2	0	0	0	318

Table B-21
Driveway 11 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	16	1	0	0	0	0	17
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	17	0	1	0	0	0	18
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	12	1	0	0	0	0	13
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	6	0	0	0	0	0	6
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	6	1	0	0	0	0	7
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	1	0	1	0	0	15
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	11	0	0	0	0	0	11
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	1	0	0	7
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	2	0	0	0	0	0	2
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	4	0	0	0	0	0	4
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	1	1	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	11	0	0	0	0	0	11
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	8	0	0	0	0	0	8
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	5	0	0	0	0	0	5
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	13	0	0	0	0	0	13
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	13	0	0	0	0	0	13
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	10	0	0	0	0	0	10
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	7	1	0	0	0	0	8
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	13	0	0	0	0	0	13
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	9	0	0	0	0	0	9
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	10	0	0	0	0	0	10
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	14	0	0	0	0	0	14
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	16	0	0	0	0	0	16
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	11	0	0	0	0	0	11
7:00 AM - 7:15 AM	1	0	0	0	0	0	1	7:00 PM - 7:15 PM	4	0	0	0	0	0	4
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	14	0	0	0	0	0	14
7:30 AM - 7:45 AM	2	0	0	0	0	0	2	7:30 PM - 7:45 PM	2	0	0	0	0	0	2
7:45 AM - 8:00 AM	1	0	0	0	0	0	1	7:45 PM - 8:00 PM	8	0	0	0	0	0	8
8:00 AM - 8:15 AM	5	0	0	0	0	0	5	8:00 PM - 8:15 PM	9	0	0	0	0	0	9
8:15 AM - 8:30 AM	2	0	0	0	0	0	2	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	7	0	0	0	0	0	7	8:30 PM - 8:45 PM	2	0	0	0	0	0	2
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	5	0	0	0	0	0	5
9:00 AM - 9:15 AM	4	0	0	0	0	0	4	9:00 PM - 9:15 PM	0	0	0	0	0	0	0
9:15 AM - 9:30 AM	9	1	0	0	0	0	10	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	3	0	0	0	0	0	3	9:30 PM - 9:45 PM	3	0	0	0	0	0	3
9:45 AM - 10:00 AM	2	1	0	0	0	0	3	9:45 PM - 10:00 PM	1	0	0	0	0	0	1
10:00 AM - 10:15 AM	4	0	0	0	0	0	4	10:00 PM - 10:15 PM	2	0	0	0	0	0	2
10:15 AM - 10:30 AM	5	0	0	1	0	0	6	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	6	0	0	0	0	0	6	10:30 PM - 10:45 PM	0	0	0	0	0	0	0
10:45 AM - 11:00 AM	4	0	0	0	0	0	4	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	10	0	0	0	0	0	10	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	6	2	0	0	0	0	8	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	9	0	0	0	0	0	9	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	11	0	0	0	0	0	11	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	101	4	0	1	0	0	106	Total	332	5	2	3	0	0	342
								Total AM + PM	433	9	2	4	0	0	448

Table B-22
Driveway 11 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	5	0	0	0	0	0	5
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	7	1	0	0	0	0	8
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	1	0	0	0	0	0	1
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	6	0	0	0	0	0	6
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	6	0	0	1	0	0	7
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	10	0	0	0	0	0	10
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	0	0	0	0	0	13
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	4	0	0	0	0	0	4
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	2	1	0	1	0	0	4
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	11	0	0	0	0	0	11
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	4	0	0	0	0	0	4
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	0	0	0	0	7
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	10	0	0	0	0	0	10
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	5	0	0	0	0	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	4	0	0	0	0	0	4
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	9	0	0	0	0	0	9
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	4	1	0	0	0	0	5
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	4	1	0	0	0	0	5
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	4	0	0	0	0	0	4
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	8	0	0	0	0	0	8
5:00 AM - 5:15 AM	0	0	0	0	0	0	0	5:00 PM - 5:15 PM	14	0	0	0	0	0	14
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	9	0	0	1	0	0	10
5:30 AM - 5:45 AM	0	0	0	0	0	0	0	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	8	0	0	0	0	0	8
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	7	1	0	0	0	0	8
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	3	0	0	0	0	0	3
6:30 AM - 6:45 AM	0	0	0	0	0	0	0	6:30 PM - 6:45 PM	11	0	0	0	0	0	11
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	0	0	0	0	0	0	0	7:00 PM - 7:15 PM	9	0	0	0	0	0	9
7:15 AM - 7:30 AM	0	0	0	0	0	0	0	7:15 PM - 7:30 PM	5	0	0	1	0	0	6
7:30 AM - 7:45 AM	0	0	0	0	0	0	0	7:30 PM - 7:45 PM	5	0	0	0	0	0	5
7:45 AM - 8:00 AM	0	0	0	0	0	0	0	7:45 PM - 8:00 PM	10	0	0	0	0	0	10
8:00 AM - 8:15 AM	0	0	0	0	0	0	0	8:00 PM - 8:15 PM	5	0	0	0	0	0	5
8:15 AM - 8:30 AM	5	0	0	1	0	0	6	8:15 PM - 8:30 PM	6	0	0	0	0	0	6
8:30 AM - 8:45 AM	1	0	0	0	0	0	1	8:30 PM - 8:45 PM	10	0	0	0	0	0	10
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	9	0	0	0	0	0	9
9:00 AM - 9:15 AM	4	0	0	0	0	0	4	9:00 PM - 9:15 PM	2	0	0	1	0	0	3
9:15 AM - 9:30 AM	6	1	0	0	0	0	7	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	6	0	0	0	0	0	6	9:30 PM - 9:45 PM	7	0	0	0	0	0	7
9:45 AM - 10:00 AM	4	1	0	0	0	0	5	9:45 PM - 10:00 PM	4	0	0	0	0	0	4
10:00 AM - 10:15 AM	3	1	0	0	0	0	4	10:00 PM - 10:15 PM	4	0	0	0	0	0	4
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	0	0	0	0	0	0	0
10:30 AM - 10:45 AM	8	0	0	0	0	0	8	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	4	0	0	0	0	0	4	10:45 PM - 11:00 PM	0	0	0	0	0	0	0
11:00 AM - 11:15 AM	6	0	0	0	0	0	6	11:00 PM - 11:15 PM	0	0	0	0	0	0	0
11:15 AM - 11:30 AM	1	0	0	0	0	0	1	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	3	0	0	0	0	0	3	11:30 PM - 11:45 PM	2	0	0	0	0	0	2
11:45 AM - 12:00 PM	5	1	0	0	0	0	6	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	66	4	0	1	0	0	71	Total	279	5	0	5	0	0	289
								Total AM + PM	345	9	0	6	0	0	360

Table B-23
Driveway 12 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	47	0	0	0	0	1	48
12:15 AM - 12:30 AM	2	0	0	0	0	0	2	12:15 PM - 12:30 PM	49	1	0	0	0	1	51
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	54	0	0	0	0	0	54
12:45 AM - 1:00 AM	2	0	0	0	0	0	2	12:45 PM - 1:00 PM	43	0	0	0	0	0	43
1:00 AM - 1:15 AM	3	0	0	0	0	0	3	1:00 PM - 1:15 PM	46	0	0	0	0	1	47
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	46	0	0	0	0	1	47
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	38	1	0	0	0	0	39
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	48	1	0	0	0	1	50
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	30	0	0	0	0	1	31
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	42	0	0	0	0	1	43
2:30 AM - 2:45 AM	1	0	0	0	0	0	1	2:30 PM - 2:45 PM	41	1	0	0	0	0	42
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	43	1	1	0	0	0	45
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	44	0	0	0	0	1	45
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	42	0	0	0	0	1	43
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	51	1	0	0	0	1	53
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	53	0	1	0	0	0	54
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	39	0	0	0	0	1	40
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	49	0	0	0	0	0	49
4:30 AM - 4:45 AM	4	0	0	0	0	0	4	4:30 PM - 4:45 PM	49	0	1	1	0	1	52
4:45 AM - 5:00 AM	6	0	0	0	0	0	6	4:45 PM - 5:00 PM	53	0	0	0	0	1	54
5:00 AM - 5:15 AM	1	1	0	0	0	0	2	5:00 PM - 5:15 PM	33	0	0	0	0	1	34
5:15 AM - 5:30 AM	1	1	0	0	0	0	2	5:15 PM - 5:30 PM	54	0	0	0	0	0	54
5:30 AM - 5:45 AM	3	1	0	0	0	0	4	5:30 PM - 5:45 PM	46	0	0	1	0	0	47
5:45 AM - 6:00 AM	8	0	0	0	0	0	8	5:45 PM - 6:00 PM	35	0	0	0	0	2	37
6:00 AM - 6:15 AM	17	0	0	0	0	0	17	6:00 PM - 6:15 PM	41	0	0	0	0	0	41
6:15 AM - 6:30 AM	10	0	1	0	0	0	11	6:15 PM - 6:30 PM	43	0	0	0	0	0	43
6:30 AM - 6:45 AM	17	0	0	0	0	0	17	6:30 PM - 6:45 PM	38	0	0	0	0	0	38
6:45 AM - 7:00 AM	15	0	0	0	0	1	16	6:45 PM - 7:00 PM	51	0	0	0	0	1	52
7:00 AM - 7:15 AM	18	1	0	0	0	0	19	7:00 PM - 7:15 PM	45	0	0	0	0	0	45
7:15 AM - 7:30 AM	16	0	0	0	0	0	16	7:15 PM - 7:30 PM	28	1	0	0	0	0	29
7:30 AM - 7:45 AM	14	0	0	0	0	0	14	7:30 PM - 7:45 PM	43	0	0	0	0	0	43
7:45 AM - 8:00 AM	16	0	0	0	0	1	17	7:45 PM - 8:00 PM	38	0	0	0	0	0	38
8:00 AM - 8:15 AM	26	0	0	1	0	0	27	8:00 PM - 8:15 PM	44	0	0	1	0	1	46
8:15 AM - 8:30 AM	36	1	0	1	0	0	38	8:15 PM - 8:30 PM	25	1	0	0	0	0	26
8:30 AM - 8:45 AM	32	0	0	0	0	0	32	8:30 PM - 8:45 PM	36	1	0	1	0	0	38
8:45 AM - 9:00 AM	33	0	0	0	0	1	34	8:45 PM - 9:00 PM	30	0	0	0	0	0	30
9:00 AM - 9:15 AM	35	1	0	1	0	1	38	9:00 PM - 9:15 PM	21	0	0	0	0	1	22
9:15 AM - 9:30 AM	37	0	0	0	0	1	38	9:15 PM - 9:30 PM	25	0	0	0	0	0	25
9:30 AM - 9:45 AM	28	0	0	0	0	0	28	9:30 PM - 9:45 PM	21	0	0	0	0	0	21
9:45 AM - 10:00 AM	46	1	0	0	0	0	47	9:45 PM - 10:00 PM	13	0	0	0	0	0	13
10:00 AM - 10:15 AM	46	0	0	0	0	1	47	10:00 PM - 10:15 PM	13	0	0	0	0	0	13
10:15 AM - 10:30 AM	51	0	0	0	0	0	51	10:15 PM - 10:30 PM	11	0	0	0	0	0	11
10:30 AM - 10:45 AM	48	2	0	0	0	1	51	10:30 PM - 10:45 PM	6	0	1	0	0	0	7
10:45 AM - 11:00 AM	42	1	0	0	0	1	44	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	48	0	0	0	0	1	49	11:00 PM - 11:15 PM	2	0	0	0	0	0	2
11:15 AM - 11:30 AM	44	0	0	0	0	0	44	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	46	1	0	0	0	0	47	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	45	0	0	0	0	1	46	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	804	11	1	3	0	10	829	Total	1,659	9	4	4	0	19	1,695
								Total AM + PM	2,463	20	5	7	0	29	2,524

Table B-24
Driveway 12 (Tuesday, August 15, 2023) - Outbound

Oubound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	2	0	0	0	0	0	2	12:00 PM - 12:15 PM	48	0	0	0	0	1	49
12:15 AM - 12:30 AM	4	0	0	0	0	0	4	12:15 PM - 12:30 PM	51	3	0	0	0	1	55
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	45	0	0	0	0	1	46
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	49	1	0	1	0	0	51
1:00 AM - 1:15 AM	4	0	0	0	0	0	4	1:00 PM - 1:15 PM	59	0	0	0	0	0	59
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	42	0	0	0	0	1	43
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	42	1	0	1	0	1	45
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	48	0	0	0	0	0	48
2:00 AM - 2:15 AM	1	0	0	0	0	0	1	2:00 PM - 2:15 PM	52	1	0	0	0	0	53
2:15 AM - 2:30 AM	1	0	0	0	0	0	1	2:15 PM - 2:30 PM	38	1	1	0	0	2	42
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	34	0	0	0	0	1	35
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	49	0	0	1	0	0	50
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	47	1	1	0	0	0	49
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	42	2	0	0	0	1	45
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	42	1	0	0	0	1	44
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	44	1	0	0	0	0	45
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	54	0	0	0	0	1	55
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	45	0	0	0	0	1	46
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	59	0	0	0	0	0	59
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	41	0	0	0	0	1	42
5:00 AM - 5:15 AM	2	1	0	0	0	0	3	5:00 PM - 5:15 PM	55	1	0	1	0	1	58
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	38	0	0	0	0	0	38
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	41	0	0	0	0	0	41
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	57	0	0	0	0	0	57
6:00 AM - 6:15 AM	9	0	0	0	0	1	10	6:00 PM - 6:15 PM	45	1	0	0	0	1	47
6:15 AM - 6:30 AM	8	0	0	0	0	0	8	6:15 PM - 6:30 PM	44	0	0	0	0	1	45
6:30 AM - 6:45 AM	12	0	1	0	0	0	13	6:30 PM - 6:45 PM	35	0	0	0	0	0	35
6:45 AM - 7:00 AM	19	0	0	1	0	0	20	6:45 PM - 7:00 PM	60	1	0	0	0	0	61
7:00 AM - 7:15 AM	18	1	0	0	0	1	20	7:00 PM - 7:15 PM	45	1	0	0	0	0	46
7:15 AM - 7:30 AM	19	1	0	0	0	0	20	7:15 PM - 7:30 PM	41	0	0	1	0	1	43
7:30 AM - 7:45 AM	22	0	0	0	0	0	22	7:30 PM - 7:45 PM	39	0	0	1	0	0	40
7:45 AM - 8:00 AM	16	0	0	0	0	0	16	7:45 PM - 8:00 PM	42	0	0	1	0	0	43
8:00 AM - 8:15 AM	14	0	0	0	0	1	15	8:00 PM - 8:15 PM	39	0	0	0	0	0	39
8:15 AM - 8:30 AM	15	0	0	0	0	0	15	8:15 PM - 8:30 PM	56	0	0	1	0	1	58
8:30 AM - 8:45 AM	32	0	0	0	0	0	32	8:30 PM - 8:45 PM	43	0	0	0	0	0	43
8:45 AM - 9:00 AM	27	0	0	1	0	0	28	8:45 PM - 9:00 PM	33	0	0	0	0	0	33
9:00 AM - 9:15 AM	32	0	0	0	0	1	33	9:00 PM - 9:15 PM	28	0	0	0	0	1	29
9:15 AM - 9:30 AM	29	1	0	0	0	0	30	9:15 PM - 9:30 PM	24	1	0	0	0	0	25
9:30 AM - 9:45 AM	39	1	0	0	0	1	41	9:30 PM - 9:45 PM	24	0	0	0	0	0	24
9:45 AM - 10:00 AM	33	0	0	0	0	0	33	9:45 PM - 10:00 PM	17	0	0	0	0	0	17
10:00 AM - 10:15 AM	41	1	0	0	0	0	42	10:00 PM - 10:15 PM	23	0	0	0	0	0	23
10:15 AM - 10:30 AM	32	0	0	0	0	1	33	10:15 PM - 10:30 PM	18	0	0	0	0	0	18
10:30 AM - 10:45 AM	38	0	0	0	0	0	38	10:30 PM - 10:45 PM	14	0	0	0	0	0	14
10:45 AM - 11:00 AM	45	2	0	0	1	1	49	10:45 PM - 11:00 PM	22	0	0	0	0	0	22
11:00 AM - 11:15 AM	49	1	0	0	0	1	51	11:00 PM - 11:15 PM	13	0	0	0	0	0	13
11:15 AM - 11:30 AM	50	0	0	0	0	0	50	11:15 PM - 11:30 PM	6	0	1	0	0	0	7
11:30 AM - 11:45 AM	42	0	0	0	0	1	43	11:30 PM - 11:45 PM	3	0	0	0	0	0	3
11:45 AM - 12:00 PM	51	0	0	0	0	0	51	11:45 PM - 12:00 AM	6	0	0	0	0	0	6
Total	714	9	1	2	1	9	736	Total	1,842	17	3	8	0	19	1,889
								Total AM + PM	2,556	26	4	10	1	28	2,625

Table B-25
Driveway 13 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	20	0	0	0	0	0	20
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	10	0	0	0	0	0	10
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	19	0	0	0	0	0	19
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	17	0	0	0	0	0	17
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	15	0	0	0	0	0	15
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	25	2	0	1	0	0	28
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	21	0	0	0	0	0	21
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	18	0	0	0	0	0	18
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	20	0	0	0	0	0	20
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	22	1	0	0	0	0	23
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	13	0	0	0	0	0	13
2:45 AM - 3:00 AM	1	0	0	0	0	0	1	2:45 PM - 3:00 PM	17	1	0	0	0	0	18
3:00 AM - 3:15 AM	1	0	0	0	0	0	1	3:00 PM - 3:15 PM	11	0	0	0	0	0	11
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	21	0	0	0	0	0	21
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	14	0	0	0	0	0	14
3:45 AM - 4:00 AM	2	0	0	0	0	0	2	3:45 PM - 4:00 PM	14	1	0	0	0	0	15
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	19	0	0	0	0	0	19
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	23	0	0	0	0	0	23
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	27	0	0	0	0	0	27
4:45 AM - 5:00 AM	1	0	0	0	0	0	1	4:45 PM - 5:00 PM	14	0	0	0	0	0	14
5:00 AM - 5:15 AM	4	0	0	0	0	0	4	5:00 PM - 5:15 PM	20	0	0	0	0	0	20
5:15 AM - 5:30 AM	3	0	0	0	0	0	3	5:15 PM - 5:30 PM	16	0	0	0	0	0	16
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	17	1	0	0	0	0	18
5:45 AM - 6:00 AM	6	0	0	0	0	0	6	5:45 PM - 6:00 PM	13	0	0	0	0	0	13
6:00 AM - 6:15 AM	3	0	0	0	0	0	3	6:00 PM - 6:15 PM	18	0	0	0	0	0	18
6:15 AM - 6:30 AM	10	0	0	0	0	0	10	6:15 PM - 6:30 PM	26	0	0	0	0	0	26
6:30 AM - 6:45 AM	8	0	0	0	0	0	8	6:30 PM - 6:45 PM	20	0	0	1	0	0	21
6:45 AM - 7:00 AM	13	3	0	0	0	0	16	6:45 PM - 7:00 PM	21	0	0	0	0	0	21
7:00 AM - 7:15 AM	4	1	0	0	0	0	5	7:00 PM - 7:15 PM	16	0	0	0	0	0	16
7:15 AM - 7:30 AM	10	0	0	0	0	0	10	7:15 PM - 7:30 PM	15	0	0	0	0	0	15
7:30 AM - 7:45 AM	9	0	0	0	0	0	9	7:30 PM - 7:45 PM	11	0	0	1	0	0	12
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	15	0	0	0	0	0	15
8:00 AM - 8:15 AM	9	0	0	0	0	0	9	8:00 PM - 8:15 PM	19	0	0	0	0	0	19
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	15	0	0	0	0	0	15
8:30 AM - 8:45 AM	9	0	0	0	0	0	9	8:30 PM - 8:45 PM	11	0	0	0	0	0	11
8:45 AM - 9:00 AM	11	0	0	0	0	0	11	8:45 PM - 9:00 PM	17	0	0	0	0	0	17
9:00 AM - 9:15 AM	24	0	0	0	0	0	24	9:00 PM - 9:15 PM	11	1	0	0	0	0	12
9:15 AM - 9:30 AM	11	0	0	0	0	0	11	9:15 PM - 9:30 PM	10	0	0	0	0	0	10
9:30 AM - 9:45 AM	17	0	0	0	0	0	17	9:30 PM - 9:45 PM	6	0	0	0	0	0	6
9:45 AM - 10:00 AM	17	1	0	0	0	0	18	9:45 PM - 10:00 PM	23	0	0	0	0	0	23
10:00 AM - 10:15 AM	20	0	0	0	0	0	20	10:00 PM - 10:15 PM	8	0	0	0	0	0	8
10:15 AM - 10:30 AM	20	0	0	0	0	0	20	10:15 PM - 10:30 PM	6	0	0	0	0	0	6
10:30 AM - 10:45 AM	24	0	0	0	0	0	24	10:30 PM - 10:45 PM	5	0	0	0	0	0	5
10:45 AM - 11:00 AM	18	0	0	0	0	0	18	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	25	0	0	0	0	0	25	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	11	0	0	0	0	0	11	11:15 PM - 11:30 PM	1	0	0	0	0	0	1
11:30 AM - 11:45 AM	26	0	0	1	0	0	27	11:30 PM - 11:45 PM	3	0	0	0	0	0	3
11:45 AM - 12:00 PM	16	0	0	0	0	0	16	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	349	5	0	1	0	0	355	Total	705	7	0	3	0	0	715
								Total AM + PM	1,054	12	0	4	0	0	1,070

Table B-26
Driveway 13 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	4	0	0	0	0	0	4	12:00 PM - 12:15 PM	15	0	0	0	0	0	15
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	13	0	0	0	0	0	13
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	20	0	0	0	0	0	20
12:45 AM - 1:00 AM	1	0	0	0	0	0	1	12:45 PM - 1:00 PM	18	0	0	0	0	0	18
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	14	2	1	0	0	0	17
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	20	0	0	0	0	0	20
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	19	0	0	0	0	0	19
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	24	1	0	0	0	0	25
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	26	0	0	0	0	0	26
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	16	1	0	1	1	0	19
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	17	1	0	0	0	0	18
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	21	0	0	0	0	0	21
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	13	0	0	0	0	0	13
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	19	0	0	0	0	0	19
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	17	0	1	1	0	0	19
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	23	0	0	0	0	0	23
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	28	0	0	0	0	0	28
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	19	0	0	0	0	0	19
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	13	1	0	0	0	0	14
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	27	0	0	0	0	0	27
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	19	0	0	0	0	0	19
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	18	0	0	0	0	0	18
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	23	0	0	0	0	0	23
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	16	0	0	0	0	0	16
6:00 AM - 6:15 AM	1	0	0	0	0	0	1	6:00 PM - 6:15 PM	25	0	0	0	0	0	25
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	16	0	0	0	0	0	16
6:30 AM - 6:45 AM	6	0	0	0	0	0	6	6:30 PM - 6:45 PM	15	0	0	0	0	0	15
6:45 AM - 7:00 AM	0	0	0	0	0	0	0	6:45 PM - 7:00 PM	17	1	0	0	0	0	18
7:00 AM - 7:15 AM	19	1	0	0	0	0	20	7:00 PM - 7:15 PM	14	0	0	0	0	0	14
7:15 AM - 7:30 AM	4	0	0	0	0	0	4	7:15 PM - 7:30 PM	21	0	0	0	0	0	21
7:30 AM - 7:45 AM	3	0	0	0	0	0	3	7:30 PM - 7:45 PM	16	0	0	0	0	0	16
7:45 AM - 8:00 AM	3	0	0	0	0	0	3	7:45 PM - 8:00 PM	23	0	0	0	0	0	23
8:00 AM - 8:15 AM	10	0	0	0	0	0	10	8:00 PM - 8:15 PM	18	0	0	0	0	0	18
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	15	0	0	0	0	0	15
8:30 AM - 8:45 AM	3	0	0	0	0	0	3	8:30 PM - 8:45 PM	15	0	0	0	0	0	15
8:45 AM - 9:00 AM	7	0	0	0	0	0	7	8:45 PM - 9:00 PM	15	0	0	0	0	0	15
9:00 AM - 9:15 AM	10	0	0	0	0	0	10	9:00 PM - 9:15 PM	17	0	0	0	0	0	17
9:15 AM - 9:30 AM	9	1	0	0	0	0	10	9:15 PM - 9:30 PM	18	0	0	0	0	0	18
9:30 AM - 9:45 AM	11	0	0	0	0	0	11	9:30 PM - 9:45 PM	13	0	0	0	0	0	13
9:45 AM - 10:00 AM	13	0	0	0	0	0	13	9:45 PM - 10:00 PM	5	0	0	0	0	0	5
10:00 AM - 10:15 AM	14	2	0	0	0	0	16	10:00 PM - 10:15 PM	13	0	0	0	0	0	13
10:15 AM - 10:30 AM	12	1	0	0	0	0	13	10:15 PM - 10:30 PM	10	0	0	0	0	0	10
10:30 AM - 10:45 AM	17	1	0	0	0	0	18	10:30 PM - 10:45 PM	5	0	0	0	0	0	5
10:45 AM - 11:00 AM	17	0	0	0	0	0	17	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	19	0	0	0	0	0	19	11:00 PM - 11:15 PM	6	0	0	0	0	0	6
11:15 AM - 11:30 AM	24	1	0	0	0	0	25	11:15 PM - 11:30 PM	3	0	0	0	0	0	3
11:30 AM - 11:45 AM	17	0	0	0	0	0	17	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	20	0	0	0	0	0	20	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	260	7	0	0	0	0	267	Total	768	7	2	2	1	0	780
								Total AM + PM	1,028	14	2	2	1	0	1,047

Table B-27
Driveway 14 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	6	0	0	0	0	0	6
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	18	1	0	0	0	0	19
12:30 AM - 12:45 AM	3	0	0	0	0	0	3	12:30 PM - 12:45 PM	12	0	0	0	0	0	12
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	20	0	0	0	0	0	20
1:00 AM - 1:15 AM	0	1	0	0	0	0	1	1:00 PM - 1:15 PM	10	0	0	0	0	0	10
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	7	0	0	0	0	0	7
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	0	0	0	1	0	14
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	15	0	0	0	0	0	15
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	9	0	0	0	0	0	9
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	13	0	0	0	0	0	13
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	11	0	0	0	0	0	11
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	14	1	0	0	0	0	15
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	0	0	0	0	0	8
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	13	0	0	0	0	0	13
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	12	0	0	0	0	0	12
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	15	1	0	0	0	0	16
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	19	1	0	0	0	0	20
4:15 AM - 4:30 AM	1	0	0	0	0	0	1	4:15 PM - 4:30 PM	10	0	0	0	0	0	10
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	16	0	0	0	0	0	16
4:45 AM - 5:00 AM	3	0	0	0	0	0	3	4:45 PM - 5:00 PM	20	0	0	0	0	0	20
5:00 AM - 5:15 AM	2	0	0	0	0	0	2	5:00 PM - 5:15 PM	19	0	0	0	0	0	19
5:15 AM - 5:30 AM	0	0	0	0	0	0	0	5:15 PM - 5:30 PM	18	1	0	0	0	0	19
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	19	1	0	0	0	0	20
6:00 AM - 6:15 AM	3	0	0	0	0	0	3	6:00 PM - 6:15 PM	16	1	0	0	0	0	17
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	9	0	0	0	0	0	9
6:30 AM - 6:45 AM	1	0	0	0	0	0	1	6:30 PM - 6:45 PM	19	0	0	0	0	0	19
6:45 AM - 7:00 AM	8	0	0	0	0	0	8	6:45 PM - 7:00 PM	12	0	0	0	0	0	12
7:00 AM - 7:15 AM	4	1	0	0	0	0	5	7:00 PM - 7:15 PM	8	0	0	0	0	0	8
7:15 AM - 7:30 AM	6	1	0	0	0	0	7	7:15 PM - 7:30 PM	19	0	0	0	0	0	19
7:30 AM - 7:45 AM	4	0	0	0	0	0	4	7:30 PM - 7:45 PM	14	0	0	0	0	0	14
7:45 AM - 8:00 AM	7	0	0	0	0	0	7	7:45 PM - 8:00 PM	6	0	0	0	0	0	6
8:00 AM - 8:15 AM	3	0	0	1	0	0	4	8:00 PM - 8:15 PM	16	1	0	0	0	0	17
8:15 AM - 8:30 AM	9	0	0	0	0	0	9	8:15 PM - 8:30 PM	17	0	0	0	0	0	17
8:30 AM - 8:45 AM	6	0	0	0	0	0	6	8:30 PM - 8:45 PM	6	0	0	1	0	0	7
8:45 AM - 9:00 AM	6	0	0	0	0	0	6	8:45 PM - 9:00 PM	11	0	0	0	0	0	11
9:00 AM - 9:15 AM	9	2	0	0	0	0	11	9:00 PM - 9:15 PM	7	0	0	0	0	0	7
9:15 AM - 9:30 AM	8	2	0	1	0	0	11	9:15 PM - 9:30 PM	5	0	0	0	0	0	5
9:30 AM - 9:45 AM	9	1	0	0	0	0	10	9:30 PM - 9:45 PM	5	0	0	0	0	0	5
9:45 AM - 10:00 AM	11	0	0	0	0	0	11	9:45 PM - 10:00 PM	6	0	0	0	0	0	6
10:00 AM - 10:15 AM	10	1	0	0	0	0	11	10:00 PM - 10:15 PM	6	0	0	0	0	0	6
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	5	0	0	0	0	0	5
10:30 AM - 10:45 AM	7	0	0	0	0	0	7	10:30 PM - 10:45 PM	6	0	0	0	0	0	6
10:45 AM - 11:00 AM	12	0	0	0	0	0	12	10:45 PM - 11:00 PM	2	0	0	0	0	0	2
11:00 AM - 11:15 AM	15	0	0	0	0	0	15	11:00 PM - 11:15 PM	2	0	0	0	0	0	2
11:15 AM - 11:30 AM	9	1	0	1	0	0	11	11:15 PM - 11:30 PM	1	0	0	1	0	0	2
11:30 AM - 11:45 AM	13	0	0	0	0	0	13	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	11	1	0	0	0	0	12	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	195	11	0	3	0	0	209	Total	527	8	0	2	1	0	538
								Total AM + PM	722	19	0	5	1	0	747

Table B-28
Driveway 14 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	4	0	0	0	0	0	4	12:00 PM - 12:15 PM	7	0	0	0	0	0	7
12:15 AM - 12:30 AM	3	0	0	0	0	0	3	12:15 PM - 12:30 PM	15	0	0	0	0	0	15
12:30 AM - 12:45 AM	10	0	0	0	0	0	10	12:30 PM - 12:45 PM	12	0	0	0	0	0	12
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	8	1	0	0	0	0	9
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	10	0	0	0	0	0	10
1:15 AM - 1:30 AM	1	1	0	0	0	0	2	1:15 PM - 1:30 PM	20	0	0	0	0	0	20
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	17	1	0	1	0	0	19
1:45 AM - 2:00 AM	1	0	0	0	0	0	1	1:45 PM - 2:00 PM	11	0	0	0	0	0	11
2:00 AM - 2:15 AM	2	0	0	0	0	0	2	2:00 PM - 2:15 PM	3	0	0	0	0	0	3
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	6	0	0	0	0	0	6
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	11	0	0	0	0	0	11
2:45 AM - 3:00 AM	2	0	0	0	0	0	2	2:45 PM - 3:00 PM	11	0	0	0	0	0	11
3:00 AM - 3:15 AM	2	0	0	0	0	0	2	3:00 PM - 3:15 PM	18	0	0	0	0	0	18
3:15 AM - 3:30 AM	2	0	0	0	0	0	2	3:15 PM - 3:30 PM	19	0	0	0	0	0	19
3:30 AM - 3:45 AM	1	0	0	0	0	0	1	3:30 PM - 3:45 PM	10	0	0	0	0	0	10
3:45 AM - 4:00 AM	1	0	0	0	0	0	1	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	9	0	1	0	0	0	10
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	11	0	0	0	0	0	11
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	16	0	0	0	0	0	16
4:45 AM - 5:00 AM	0	0	0	0	0	0	0	4:45 PM - 5:00 PM	12	1	0	0	0	0	13
5:00 AM - 5:15 AM	1	1	0	0	0	0	2	5:00 PM - 5:15 PM	9	0	0	0	1	0	10
5:15 AM - 5:30 AM	2	1	0	0	0	0	3	5:15 PM - 5:30 PM	17	0	0	0	0	0	17
5:30 AM - 5:45 AM	4	0	0	0	0	0	4	5:30 PM - 5:45 PM	12	1	0	0	0	0	13
5:45 AM - 6:00 AM	0	0	0	0	0	0	0	5:45 PM - 6:00 PM	13	2	0	0	0	0	15
6:00 AM - 6:15 AM	4	1	0	0	0	0	5	6:00 PM - 6:15 PM	13	0	0	0	0	0	13
6:15 AM - 6:30 AM	0	0	0	0	0	0	0	6:15 PM - 6:30 PM	15	0	0	0	0	0	15
6:30 AM - 6:45 AM	2	1	0	0	0	0	3	6:30 PM - 6:45 PM	14	0	0	0	0	0	14
6:45 AM - 7:00 AM	4	0	0	0	0	0	4	6:45 PM - 7:00 PM	16	0	0	0	0	0	16
7:00 AM - 7:15 AM	5	2	0	0	0	0	7	7:00 PM - 7:15 PM	7	0	0	0	0	0	7
7:15 AM - 7:30 AM	4	2	0	0	0	0	6	7:15 PM - 7:30 PM	26	0	0	1	0	0	27
7:30 AM - 7:45 AM	5	0	1	0	0	0	6	7:30 PM - 7:45 PM	14	0	0	0	0	0	14
7:45 AM - 8:00 AM	3	2	0	0	0	0	5	7:45 PM - 8:00 PM	8	1	0	0	0	0	9
8:00 AM - 8:15 AM	7	2	0	1	0	0	10	8:00 PM - 8:15 PM	20	0	0	0	0	0	20
8:15 AM - 8:30 AM	5	0	0	0	0	0	5	8:15 PM - 8:30 PM	12	0	0	0	0	0	12
8:30 AM - 8:45 AM	4	0	0	0	0	0	4	8:30 PM - 8:45 PM	11	0	0	0	0	0	11
8:45 AM - 9:00 AM	9	1	0	0	0	0	10	8:45 PM - 9:00 PM	10	0	0	0	0	0	10
9:00 AM - 9:15 AM	6	0	0	0	0	0	6	9:00 PM - 9:15 PM	11	0	0	0	0	0	11
9:15 AM - 9:30 AM	7	0	0	0	0	0	7	9:15 PM - 9:30 PM	12	0	0	0	0	0	12
9:30 AM - 9:45 AM	6	0	0	0	0	0	6	9:30 PM - 9:45 PM	10	0	0	0	0	0	10
9:45 AM - 10:00 AM	6	0	0	0	0	0	6	9:45 PM - 10:00 PM	10	0	0	0	0	0	10
10:00 AM - 10:15 AM	14	0	0	0	0	0	14	10:00 PM - 10:15 PM	17	0	0	0	0	0	17
10:15 AM - 10:30 AM	4	0	1	0	0	0	5	10:15 PM - 10:30 PM	10	0	0	0	0	0	10
10:30 AM - 10:45 AM	11	0	0	0	0	0	11	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	11	0	0	1	0	0	12	10:45 PM - 11:00 PM	7	0	0	0	0	0	7
11:00 AM - 11:15 AM	5	0	0	0	0	0	5	11:00 PM - 11:15 PM	5	0	0	0	0	0	5
11:15 AM - 11:30 AM	12	0	0	0	0	0	12	11:15 PM - 11:30 PM	4	0	0	0	0	0	4
11:30 AM - 11:45 AM	7	0	0	0	0	0	7	11:30 PM - 11:45 PM	1	0	0	0	0	0	1
11:45 AM - 12:00 PM	17	1	0	0	0	0	18	11:45 PM - 12:00 AM	3	0	0	0	0	0	3
Total	195	15	2	2	0	0	214	Total	546	7	1	2	1	0	557
								Total AM + PM	741	22	3	4	1	0	771

Table B-29
Driveway 15 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	27	0	0	0	0	0	27
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	20	0	0	0	0	0	20
12:30 AM - 12:45 AM	3	0	0	0	0	0	3	12:30 PM - 12:45 PM	15	1	0	0	0	0	16
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	12	1	0	0	0	0	13
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	11	1	0	0	0	0	12
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	11	0	0	0	0	0	11
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	16	0	0	0	0	0	16
1:45 AM - 2:00 AM	0	0	0	1	0	0	1	1:45 PM - 2:00 PM	13	0	0	0	0	0	13
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	15	0	0	0	0	0	15
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	10	0	0	0	0	0	10
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	13	1	0	0	0	0	14
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	16	0	0	0	0	0	16
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	11	1	0	0	0	0	12
3:15 AM - 3:30 AM	1	0	0	0	0	0	1	3:15 PM - 3:30 PM	15	0	0	0	0	0	15
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	11	0	0	0	0	0	11
3:45 AM - 4:00 AM	3	0	0	0	0	0	3	3:45 PM - 4:00 PM	3	0	0	0	0	0	3
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	14	0	0	0	0	0	14
4:15 AM - 4:30 AM	0	0	0	1	0	0	1	4:15 PM - 4:30 PM	0	0	0	0	0	0	0
4:30 AM - 4:45 AM	4	0	0	0	0	0	4	4:30 PM - 4:45 PM	12	0	0	0	0	0	12
4:45 AM - 5:00 AM	3	0	0	0	0	0	3	4:45 PM - 5:00 PM	17	0	0	0	0	0	17
5:00 AM - 5:15 AM	5	0	0	0	0	0	5	5:00 PM - 5:15 PM	15	0	0	0	0	0	15
5:15 AM - 5:30 AM	1	0	0	0	0	0	1	5:15 PM - 5:30 PM	17	0	0	0	0	0	17
5:30 AM - 5:45 AM	4	0	0	0	0	0	4	5:30 PM - 5:45 PM	18	0	0	0	0	0	18
5:45 AM - 6:00 AM	6	0	0	0	0	0	6	5:45 PM - 6:00 PM	23	0	0	0	0	0	23
6:00 AM - 6:15 AM	6	0	0	0	0	0	6	6:00 PM - 6:15 PM	14	0	0	0	0	0	14
6:15 AM - 6:30 AM	3	0	0	0	0	0	3	6:15 PM - 6:30 PM	19	0	0	0	0	0	19
6:30 AM - 6:45 AM	11	1	0	0	0	0	12	6:30 PM - 6:45 PM	16	0	0	0	0	0	16
6:45 AM - 7:00 AM	9	0	0	0	0	0	9	6:45 PM - 7:00 PM	16	1	0	0	0	0	17
7:00 AM - 7:15 AM	12	0	0	0	0	0	12	7:00 PM - 7:15 PM	19	0	0	0	0	0	19
7:15 AM - 7:30 AM	10	0	0	0	0	0	10	7:15 PM - 7:30 PM	13	0	0	0	0	0	13
7:30 AM - 7:45 AM	12	0	0	0	0	0	12	7:30 PM - 7:45 PM	17	0	0	0	0	0	17
7:45 AM - 8:00 AM	15	1	0	0	0	0	16	7:45 PM - 8:00 PM	17	0	0	0	0	0	17
8:00 AM - 8:15 AM	13	0	0	0	0	0	13	8:00 PM - 8:15 PM	10	0	0	0	0	0	10
8:15 AM - 8:30 AM	10	0	0	0	0	0	10	8:15 PM - 8:30 PM	10	0	0	0	0	0	10
8:30 AM - 8:45 AM	9	0	0	0	0	0	9	8:30 PM - 8:45 PM	9	0	0	0	0	0	9
8:45 AM - 9:00 AM	17	1	1	0	0	0	19	8:45 PM - 9:00 PM	9	0	0	0	0	0	9
9:00 AM - 9:15 AM	14	0	0	0	0	0	14	9:00 PM - 9:15 PM	7	0	0	0	0	0	7
9:15 AM - 9:30 AM	7	0	1	0	0	0	8	9:15 PM - 9:30 PM	4	0	0	0	0	0	4
9:30 AM - 9:45 AM	9	1	0	0	0	0	10	9:30 PM - 9:45 PM	11	0	0	0	0	0	11
9:45 AM - 10:00 AM	11	0	0	0	0	0	11	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	12	0	0	0	0	0	12	10:00 PM - 10:15 PM	5	0	0	0	0	0	5
10:15 AM - 10:30 AM	17	0	0	0	0	0	17	10:15 PM - 10:30 PM	5	0	0	0	0	0	5
10:30 AM - 10:45 AM	15	0	0	0	0	0	15	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	10	4	0	0	0	0	14	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	13	1	0	0	0	0	14	11:00 PM - 11:15 PM	3	0	0	0	0	0	3
11:15 AM - 11:30 AM	16	1	0	0	0	0	17	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	5	0	0	0	0	0	5	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	13	0	0	0	0	0	13	11:45 PM - 12:00 AM	2	0	0	0	0	0	2
Total	303	10	2	2	0	0	317	Total	550	6	0	0	0	0	556
								Total AM + PM	853	16	2	2	0	0	873

Table B-30
Driveway 15 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	7	0	0	0	0	0	7	12:00 PM - 12:15 PM	9	0	0	0	0	0	9
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	22	0	0	0	0	0	22
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	10	0	0	0	0	0	10
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	15	0	0	0	0	0	15
1:00 AM - 1:15 AM	2	0	0	0	0	0	2	1:00 PM - 1:15 PM	15	0	0	0	0	0	15
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	16	2	0	0	0	0	18
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	13	0	0	0	0	0	13
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	20	1	0	0	0	0	21
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	11	0	0	0	0	0	11
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	14	0	0	0	0	0	14
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	13	0	0	0	0	0	13
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	9	0	0	0	0	0	9
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	10	1	0	0	0	0	11
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	8	0	0	0	0	0	8
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	12	1	0	0	0	0	13
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	10	0	0	0	0	0	10
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	7	0	0	0	0	0	7
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	0	0	0	0	0	0	0
4:30 AM - 4:45 AM	1	0	0	0	0	0	1	4:30 PM - 4:45 PM	10	1	0	0	0	0	11
4:45 AM - 5:00 AM	5	0	0	0	0	0	5	4:45 PM - 5:00 PM	16	0	0	0	0	0	16
5:00 AM - 5:15 AM	2	0	0	0	0	0	2	5:00 PM - 5:15 PM	12	0	0	0	0	0	12
5:15 AM - 5:30 AM	3	0	0	0	0	0	3	5:15 PM - 5:30 PM	14	0	0	0	0	0	14
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	19	2	0	0	0	0	21
5:45 AM - 6:00 AM	2	0	0	0	0	0	2	5:45 PM - 6:00 PM	13	0	0	0	0	0	13
6:00 AM - 6:15 AM	4	0	0	0	0	0	4	6:00 PM - 6:15 PM	16	0	0	0	0	0	16
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	15	0	0	0	0	0	15
6:30 AM - 6:45 AM	6	1	0	0	0	0	7	6:30 PM - 6:45 PM	15	0	0	0	0	0	15
6:45 AM - 7:00 AM	8	1	0	1	0	0	10	6:45 PM - 7:00 PM	19	0	0	0	0	0	19
7:00 AM - 7:15 AM	6	0	0	0	0	0	6	7:00 PM - 7:15 PM	16	0	0	0	0	0	16
7:15 AM - 7:30 AM	6	0	0	0	0	0	6	7:15 PM - 7:30 PM	3	0	0	0	0	0	3
7:30 AM - 7:45 AM	18	0	0	1	0	0	19	7:30 PM - 7:45 PM	13	1	0	0	0	0	14
7:45 AM - 8:00 AM	10	1	0	0	0	0	11	7:45 PM - 8:00 PM	13	0	0	0	0	0	13
8:00 AM - 8:15 AM	6	0	0	0	0	0	6	8:00 PM - 8:15 PM	14	0	0	0	0	0	14
8:15 AM - 8:30 AM	7	0	0	0	0	0	7	8:15 PM - 8:30 PM	18	0	0	0	0	0	18
8:30 AM - 8:45 AM	5	0	0	1	0	0	6	8:30 PM - 8:45 PM	16	0	0	0	0	0	16
8:45 AM - 9:00 AM	4	0	0	0	0	0	4	8:45 PM - 9:00 PM	10	0	0	0	0	0	10
9:00 AM - 9:15 AM	15	0	0	0	0	0	15	9:00 PM - 9:15 PM	8	0	0	0	0	0	8
9:15 AM - 9:30 AM	6	0	1	0	0	0	7	9:15 PM - 9:30 PM	12	0	0	0	0	0	12
9:30 AM - 9:45 AM	14	1	0	0	0	0	15	9:30 PM - 9:45 PM	5	0	0	0	0	0	5
9:45 AM - 10:00 AM	7	0	0	0	0	0	7	9:45 PM - 10:00 PM	9	0	0	0	0	0	9
10:00 AM - 10:15 AM	11	0	0	0	0	0	11	10:00 PM - 10:15 PM	6	0	0	0	0	0	6
10:15 AM - 10:30 AM	5	0	0	0	0	0	5	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	7	0	0	0	0	0	7	10:30 PM - 10:45 PM	3	0	0	0	0	0	3
10:45 AM - 11:00 AM	6	0	0	0	0	0	6	10:45 PM - 11:00 PM	6	0	0	0	0	0	6
11:00 AM - 11:15 AM	12	0	0	0	0	0	12	11:00 PM - 11:15 PM	4	0	0	0	0	0	4
11:15 AM - 11:30 AM	7	0	0	0	0	0	7	11:15 PM - 11:30 PM	2	0	0	0	0	0	2
11:30 AM - 11:45 AM	18	0	0	0	0	0	18	11:30 PM - 11:45 PM	2	0	0	0	0	0	2
11:45 AM - 12:00 PM	15	5	0	0	0	0	20	11:45 PM - 12:00 AM	1	0	0	0	0	0	1
Total	229	9	1	3	0	0	242	Total	527	9	0	0	0	0	536
								Total AM + PM	756	18	1	3	0	0	778

Table B-31
Driveway 16 (Tuesday, August 15, 2023) - Inbound

Inbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	0	0	0	0	0	0	0	12:00 PM - 12:15 PM	12	0	0	0	0	0	12
12:15 AM - 12:30 AM	0	0	0	0	0	0	0	12:15 PM - 12:30 PM	11	1	0	0	0	0	12
12:30 AM - 12:45 AM	0	0	0	0	0	0	0	12:30 PM - 12:45 PM	10	0	0	0	0	0	10
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	10	0	0	0	0	0	10
1:00 AM - 1:15 AM	0	0	0	0	0	0	0	1:00 PM - 1:15 PM	9	2	0	0	0	0	11
1:15 AM - 1:30 AM	1	0	0	0	0	0	1	1:15 PM - 1:30 PM	8	0	0	0	0	0	8
1:30 AM - 1:45 AM	0	0	0	0	0	0	0	1:30 PM - 1:45 PM	7	0	0	1	0	0	8
1:45 AM - 2:00 AM	0	0	0	0	0	0	0	1:45 PM - 2:00 PM	6	0	0	1	0	0	7
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	0	0	0	6
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	3	0	0	0	0	0	3
2:30 AM - 2:45 AM	0	0	0	0	0	0	0	2:30 PM - 2:45 PM	6	1	0	0	0	0	7
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	12	0	0	0	0	0	12
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	8	1	0	0	0	0	9
3:15 AM - 3:30 AM	0	2	0	0	0	0	2	3:15 PM - 3:30 PM	4	0	0	0	1	0	5
3:30 AM - 3:45 AM	0	0	0	0	0	0	0	3:30 PM - 3:45 PM	6	0	0	0	0	0	6
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	6	0	0	0	0	0	6
4:00 AM - 4:15 AM	1	0	0	0	0	0	1	4:00 PM - 4:15 PM	7	0	0	0	0	0	7
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	10	0	0	0	0	0	10
4:30 AM - 4:45 AM	2	0	0	0	0	0	2	4:30 PM - 4:45 PM	7	0	0	0	0	0	7
4:45 AM - 5:00 AM	3	0	0	0	0	0	3	4:45 PM - 5:00 PM	11	0	0	0	0	0	11
5:00 AM - 5:15 AM	1	0	0	0	0	0	1	5:00 PM - 5:15 PM	9	0	0	0	0	0	9
5:15 AM - 5:30 AM	3	0	0	1	0	0	4	5:15 PM - 5:30 PM	8	0	0	0	0	0	8
5:30 AM - 5:45 AM	1	0	0	0	0	0	1	5:30 PM - 5:45 PM	11	0	0	0	0	0	11
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	2	0	0	0	0	0	2	6:00 PM - 6:15 PM	8	0	0	0	0	0	8
6:15 AM - 6:30 AM	2	0	0	0	0	0	2	6:15 PM - 6:30 PM	8	0	0	0	0	0	8
6:30 AM - 6:45 AM	3	0	0	0	0	0	3	6:30 PM - 6:45 PM	3	0	0	0	0	0	3
6:45 AM - 7:00 AM	1	0	0	0	0	0	1	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	4	0	0	0	0	0	4	7:00 PM - 7:15 PM	5	0	0	0	0	0	5
7:15 AM - 7:30 AM	4	0	0	0	0	0	4	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	10	0	0	0	0	0	10	7:30 PM - 7:45 PM	11	0	0	0	0	0	11
7:45 AM - 8:00 AM	10	0	0	0	0	0	10	7:45 PM - 8:00 PM	5	0	0	0	0	0	5
8:00 AM - 8:15 AM	7	0	0	1	0	0	8	8:00 PM - 8:15 PM	2	0	0	0	0	0	2
8:15 AM - 8:30 AM	7	1	0	1	0	0	9	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	12	0	0	0	0	0	12	8:30 PM - 8:45 PM	3	0	0	0	0	0	3
8:45 AM - 9:00 AM	13	1	0	0	0	0	14	8:45 PM - 9:00 PM	2	0	0	0	0	0	2
9:00 AM - 9:15 AM	6	0	0	0	0	0	6	9:00 PM - 9:15 PM	2	0	0	0	0	0	2
9:15 AM - 9:30 AM	6	0	0	0	0	0	6	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	8	0	0	0	0	0	8	9:30 PM - 9:45 PM	1	0	0	0	0	0	1
9:45 AM - 10:00 AM	8	0	0	0	0	0	8	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	2	0	0	0	0	0	2	10:00 PM - 10:15 PM	1	0	0	0	0	0	1
10:15 AM - 10:30 AM	12	0	0	0	0	0	12	10:15 PM - 10:30 PM	2	0	0	0	0	0	2
10:30 AM - 10:45 AM	8	0	0	0	0	0	8	10:30 PM - 10:45 PM	1	0	0	0	0	0	1
10:45 AM - 11:00 AM	5	1	0	0	0	0	6	10:45 PM - 11:00 PM	1	0	0	0	0	0	1
11:00 AM - 11:15 AM	1	0	0	0	0	0	1	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	15	0	0	0	0	0	15	11:15 PM - 11:30 PM	0	0	0	0	0	0	0
11:30 AM - 11:45 AM	12	1	0	0	0	0	13	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	11	1	0	0	0	0	12	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	182	7	0	3	0	0	192	Total	276	5	0	2	1	0	284
								Total AM + PM	458	12	0	5	1	0	476

Table B-32
Driveway 16 (Tuesday, August 15, 2023) - Outbound

Outbound																
	Number of Vehicles								Number of Vehicles							
Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total	Time Period	Passenger Car	2-Axle Trucks	3-Axle Trucks	4+-Axle Trucks	RV	Buses	Total
12:00 AM - 12:15 AM	1	0	0	0	0	0	1	12:00 PM - 12:15 PM	9	0	0	0	0	0	9
12:15 AM - 12:30 AM	1	0	0	0	0	0	1	12:15 PM - 12:30 PM	13	0	0	0	0	0	13
12:30 AM - 12:45 AM	1	0	0	0	0	0	1	12:30 PM - 12:45 PM	11	0	0	0	0	0	11
12:45 AM - 1:00 AM	0	0	0	0	0	0	0	12:45 PM - 1:00 PM	14	0	0	0	0	0	14
1:00 AM - 1:15 AM	1	0	0	0	0	0	1	1:00 PM - 1:15 PM	13	3	0	0	0	0	16
1:15 AM - 1:30 AM	0	0	0	0	0	0	0	1:15 PM - 1:30 PM	6	1	0	0	0	0	7
1:30 AM - 1:45 AM	2	0	0	0	0	0	2	1:30 PM - 1:45 PM	8	0	0	0	0	0	8
1:45 AM - 2:00 AM	2	0	0	0	0	0	2	1:45 PM - 2:00 PM	9	0	0	0	0	0	9
2:00 AM - 2:15 AM	0	0	0	0	0	0	0	2:00 PM - 2:15 PM	6	0	0	1	0	0	7
2:15 AM - 2:30 AM	0	0	0	0	0	0	0	2:15 PM - 2:30 PM	15	0	0	0	0	0	15
2:30 AM - 2:45 AM	0	0	0	1	0	0	1	2:30 PM - 2:45 PM	5	0	0	1	0	0	6
2:45 AM - 3:00 AM	0	0	0	0	0	0	0	2:45 PM - 3:00 PM	7	0	0	0	0	0	7
3:00 AM - 3:15 AM	0	0	0	0	0	0	0	3:00 PM - 3:15 PM	7	0	0	0	0	0	7
3:15 AM - 3:30 AM	0	0	0	0	0	0	0	3:15 PM - 3:30 PM	7	0	0	0	0	0	7
3:30 AM - 3:45 AM	0	2	0	0	0	0	2	3:30 PM - 3:45 PM	8	0	1	0	0	0	9
3:45 AM - 4:00 AM	0	0	0	0	0	0	0	3:45 PM - 4:00 PM	7	0	0	0	0	0	7
4:00 AM - 4:15 AM	0	0	0	0	0	0	0	4:00 PM - 4:15 PM	4	0	0	0	0	0	4
4:15 AM - 4:30 AM	0	0	0	0	0	0	0	4:15 PM - 4:30 PM	5	1	0	0	0	0	6
4:30 AM - 4:45 AM	0	0	0	0	0	0	0	4:30 PM - 4:45 PM	7	0	0	0	1	0	8
4:45 AM - 5:00 AM	2	0	0	0	0	0	2	4:45 PM - 5:00 PM	7	0	0	0	0	0	7
5:00 AM - 5:15 AM	3	0	0	0	0	0	3	5:00 PM - 5:15 PM	6	0	0	0	0	0	6
5:15 AM - 5:30 AM	2	0	0	0	0	0	2	5:15 PM - 5:30 PM	5	0	0	0	0	0	5
5:30 AM - 5:45 AM	2	0	0	0	0	0	2	5:30 PM - 5:45 PM	7	0	0	0	0	0	7
5:45 AM - 6:00 AM	1	0	0	0	0	0	1	5:45 PM - 6:00 PM	9	0	0	0	0	0	9
6:00 AM - 6:15 AM	5	0	0	0	0	0	5	6:00 PM - 6:15 PM	12	0	0	0	0	0	12
6:15 AM - 6:30 AM	1	0	0	0	0	0	1	6:15 PM - 6:30 PM	4	0	0	0	0	0	4
6:30 AM - 6:45 AM	4	0	0	0	0	0	4	6:30 PM - 6:45 PM	5	0	0	0	0	0	5
6:45 AM - 7:00 AM	2	0	0	0	0	0	2	6:45 PM - 7:00 PM	6	0	0	0	0	0	6
7:00 AM - 7:15 AM	6	0	0	0	0	0	6	7:00 PM - 7:15 PM	6	0	0	0	0	0	6
7:15 AM - 7:30 AM	2	0	0	0	0	0	2	7:15 PM - 7:30 PM	6	0	0	0	0	0	6
7:30 AM - 7:45 AM	2	0	0	0	0	0	2	7:30 PM - 7:45 PM	9	0	0	0	0	0	9
7:45 AM - 8:00 AM	5	0	0	0	0	0	5	7:45 PM - 8:00 PM	4	0	0	0	0	0	4
8:00 AM - 8:15 AM	5	0	0	0	0	0	5	8:00 PM - 8:15 PM	4	1	0	0	0	0	5
8:15 AM - 8:30 AM	6	0	0	0	0	0	6	8:15 PM - 8:30 PM	7	0	0	0	0	0	7
8:30 AM - 8:45 AM	8	0	0	0	0	0	8	8:30 PM - 8:45 PM	9	0	0	0	0	0	9
8:45 AM - 9:00 AM	4	0	1	1	0	0	6	8:45 PM - 9:00 PM	4	0	0	0	0	0	4
9:00 AM - 9:15 AM	7	0	0	0	0	0	7	9:00 PM - 9:15 PM	2	0	0	0	0	0	2
9:15 AM - 9:30 AM	5	1	0	0	0	0	6	9:15 PM - 9:30 PM	2	0	0	0	0	0	2
9:30 AM - 9:45 AM	6	0	0	0	0	0	6	9:30 PM - 9:45 PM	3	0	0	0	0	0	3
9:45 AM - 10:00 AM	5	0	1	0	0	0	6	9:45 PM - 10:00 PM	3	0	0	0	0	0	3
10:00 AM - 10:15 AM	5	0	0	0	0	0	5	10:00 PM - 10:15 PM	5	0	0	0	0	0	5
10:15 AM - 10:30 AM	9	0	0	0	0	0	9	10:15 PM - 10:30 PM	3	0	0	0	0	0	3
10:30 AM - 10:45 AM	5	0	0	0	0	0	5	10:30 PM - 10:45 PM	5	0	0	0	0	0	5
10:45 AM - 11:00 AM	6	1	0	0	0	0	7	10:45 PM - 11:00 PM	3	0	0	0	0	0	3
11:00 AM - 11:15 AM	10	0	0	0	0	0	10	11:00 PM - 11:15 PM	1	0	0	0	0	0	1
11:15 AM - 11:30 AM	6	0	0	0	0	0	6	11:15 PM - 11:30 PM	3	0	0	0	0	0	3
11:30 AM - 11:45 AM	14	0	0	0	0	0	14	11:30 PM - 11:45 PM	0	0	0	0	0	0	0
11:45 AM - 12:00 PM	6	1	0	0	0	0	7	11:45 PM - 12:00 AM	0	0	0	0	0	0	0
Total	152	5	2	2	0	0	161	Total	301	6	1	2	1	0	311
								Total AM + PM	453	11	3	4	1	0	472

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY1 Western dwy south of Bear Valley Rd (west of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	47	0	0	0	0	0	47
0:15	4	0	0	0	0	0	4	12:15	45	2	0	0	0	0	47
0:30	0	0	0	0	0	0	0	12:30	58	0	0	0	0	0	58
0:45	0	0	0	1	0	0	1	12:45	46	4	0	0	0	0	50
1:00	0	0	0	0	0	0	0	13:00	53	0	0	0	0	0	53
1:15	0	0	0	0	0	0	0	13:15	60	0	0	0	1	0	61
1:30	0	0	0	1	0	0	1	13:30	35	2	1	1	0	0	39
1:45	2	0	0	0	0	0	2	13:45	48	1	1	0	0	0	50
2:00	0	0	0	0	0	0	0	14:00	42	0	0	0	0	0	42
2:15	1	0	0	0	0	0	1	14:15	51	3	0	0	0	0	54
2:30	0	0	0	0	0	0	0	14:30	33	1	1	0	0	0	35
2:45	0	0	0	0	0	0	0	14:45	60	0	0	0	0	0	60
3:00	0	0	0	0	0	0	0	15:00	40	0	0	0	0	0	40
3:15	2	1	0	0	0	0	3	15:15	56	0	0	0	0	0	56
3:30	1	0	0	1	0	0	2	15:30	68	2	0	0	0	0	70
3:45	2	0	0	0	0	0	2	15:45	59	0	0	0	0	0	59
4:00	0	0	0	0	0	0	0	16:00	40	0	0	0	0	0	40
4:15	2	0	0	0	0	0	2	16:15	46	1	1	0	0	0	48
4:30	3	0	0	0	0	0	3	16:30	58	0	0	0	0	0	58
4:45	7	0	0	0	0	0	7	16:45	56	1	0	0	0	0	57
5:00	1	3	0	0	0	0	4	17:00	47	0	0	0	0	0	47
5:15	4	0	0	0	0	0	4	17:15	47	0	0	0	0	0	47
5:30	7	0	0	0	0	0	7	17:30	44	0	0	0	0	0	44
5:45	7	0	0	0	0	0	7	17:45	51	1	0	0	0	0	52
6:00	3	0	0	1	0	0	4	18:00	38	1	1	1	0	0	41
6:15	8	0	0	0	0	0	8	18:15	50	0	0	0	0	0	50
6:30	15	0	0	0	0	0	15	18:30	50	1	0	0	0	0	51
6:45	17	1	2	0	0	0	20	18:45	37	0	0	1	0	0	38
7:00	13	0	1	0	1	0	15	19:00	33	1	0	0	0	0	34
7:15	18	1	0	0	0	0	19	19:15	36	0	0	0	0	0	36
7:30	14	1	0	0	0	0	15	19:30	38	0	0	0	0	0	38
7:45	25	0	0	0	0	0	25	19:45	27	0	0	0	0	0	27
8:00	20	1	0	0	0	0	21	20:00	28	0	0	0	0	0	28
8:15	19	0	0	1	0	0	20	20:15	25	0	0	1	0	0	26
8:30	29	0	0	1	0	0	30	20:30	20	0	0	0	0	0	20
8:45	38	0	0	0	0	0	38	20:45	22	0	0	0	0	0	22
9:00	45	1	0	2	0	0	48	21:00	14	0	0	0	0	0	14
9:15	46	2	0	0	0	0	48	21:15	7	0	0	0	0	0	7
9:30	37	1	0	1	0	0	39	21:30	7	0	0	1	0	0	8
9:45	42	2	0	1	0	0	45	21:45	13	0	0	1	0	0	14
10:00	54	1	0	1	0	0	56	22:00	6	0	0	0	0	0	6
10:15	46	1	0	0	0	1	48	22:15	5	0	0	1	0	0	6
10:30	46	1	1	0	0	0	48	22:30	10	0	0	0	0	0	10
10:45	40	2	1	0	0	0	43	22:45	6	0	0	0	0	0	6
11:00	45	0	0	0	0	0	45	23:00	6	0	0	0	0	0	6
11:15	52	0	0	1	0	0	53	23:15	4	0	0	0	0	0	4
11:30	42	3	0	1	0	1	47	23:30	1	0	0	0	0	0	1
11:45	51	1	0	0	0	0	52	23:45	1	0	0	0	0	0	1
TOTAL	808	23	5	13	1	2	852	**TOTAL**	1,674	21	5	7	1	0	1,708

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	197

AM PEAK HOUR	2:45 PM
AM PEAK VOLUME	226

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	2,482	44	10	20	2	2	2,560
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	97.0%	1.7%	0.4%	0.8%	0.1%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	5,485	86	18	38	2	4	5,633
CLASS 6	Buses	**% OF TOTAL**	97.4%	1.5%	0.3%	0.7%	0.0%	0.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY1 Western dwy south of Bear Valley Rd (west of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	9	0	0	0	0	0	9
0:15	3	0	0	0	0	0	3
0:30	4	0	0	0	0	0	4
0:45	0	0	0	0	0	0	0
1:00	3	0	0	0	0	0	3
1:15	4	0	0	0	0	0	4
1:30	0	0	0	0	0	0	0
1:45	0	0	0	1	0	0	1
2:00	1	0	0	0	0	0	1
2:15	0	0	0	1	0	0	1
2:30	1	0	0	0	0	0	1
2:45	1	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	3	0	0	0	0	0	3
3:45	2	1	0	0	0	0	3
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	1	0	0	0	0	0	1
5:00	1	0	0	0	0	0	1
5:15	1	0	0	0	0	0	1
5:30	3	2	0	0	0	0	5
5:45	1	0	0	0	0	0	1
6:00	1	0	0	1	0	0	2
6:15	6	0	0	0	0	0	6
6:30	3	0	0	0	0	0	3
6:45	9	1	1	0	0	0	11
7:00	10	1	0	0	0	0	11
7:15	17	1	0	0	0	0	18
7:30	16	1	0	0	0	0	17
7:45	21	1	0	1	0	0	23
8:00	14	0	0	0	0	0	14
8:15	23	1	0	1	0	0	25
8:30	23	0	1	1	0	0	25
8:45	30	0	0	1	0	0	31
9:00	30	0	1	1	0	1	33
9:15	26	0	0	0	0	0	26
9:30	39	1	0	0	0	0	40
9:45	43	0	0	1	0	0	44
10:00	36	2	0	0	0	0	38
10:15	35	1	0	1	0	0	37
10:30	46	3	1	1	0	0	51
10:45	57	1	0	0	0	0	58
11:00	51	1	0	0	0	0	52
11:15	56	1	0	0	0	0	57
11:30	35	0	0	0	0	0	35
11:45	47	0	0	0	0	1	48
TOTAL	712	19	4	11	0	2	748

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	218

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	63	0	0	0	0	0	63
12:15	66	2	0	0	0	0	68
12:30	63	0	0	0	0	0	63
12:45	67	1	0	1	0	0	69
13:00	56	0	0	0	0	0	56
13:15	59	0	0	0	0	0	59
13:30	58	0	0	0	0	0	58
13:45	59	1	1	2	0	0	63
14:00	59	1	0	0	0	0	60
14:15	67	0	0	0	0	0	67
14:30	54	1	1	0	0	0	56
14:45	64	3	1	0	0	0	68
15:00	55	1	0	0	0	0	56
15:15	55	0	0	0	0	0	55
15:30	62	1	0	0	0	0	63
15:45	65	2	0	0	0	0	67
16:00	59	1	0	0	0	0	60
16:15	75	0	0	0	0	0	75
16:30	64	0	1	1	0	0	66
16:45	66	1	0	0	0	0	67
17:00	62	1	0	0	0	0	63
17:15	59	0	0	1	0	0	60
17:30	57	0	0	0	0	0	57
17:45	64	1	0	0	0	0	65
18:00	68	2	0	0	0	0	70
18:15	64	1	0	0	0	0	65
18:30	71	0	0	0	0	0	71
18:45	44	0	0	0	0	0	44
19:00	52	1	0	0	0	0	53
19:15	59	0	0	0	0	0	59
19:30	46	1	0	0	0	0	47
19:45	49	0	0	0	0	0	49
20:00	56	0	0	0	0	0	56
20:15	53	0	0	0	0	0	53
20:30	45	0	0	0	0	0	45
20:45	38	0	0	0	0	0	38
21:00	33	0	0	0	0	0	33
21:15	22	0	0	0	0	0	22
21:30	21	0	0	0	0	0	21
21:45	16	0	0	0	0	0	16
22:00	20	0	0	0	0	0	20
22:15	10	0	0	1	0	0	11
22:30	9	0	0	0	0	0	9
22:45	10	1	0	1	0	0	12
23:00	15	0	0	0	0	0	15
23:15	7	0	0	0	0	0	7
23:30	3	0	0	0	0	0	3
23:45	2	0	0	0	0	0	2
TOTAL	2,291	23	4	7	0	0	2,325

AM PEAK HOUR	5:45 PM
AM PEAK VOLUME	271

TOTAL: AM+PM	3,003	42	8	18	0	2	3,073
% OF TOTAL	97.7%	1.4%	0.3%	0.6%	0.0%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY1 Western dwy south of Bear Valley Rd (west of Mall Blvd)

AM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL
0:00	9	0	0	0	0	0	9
0:15	7	0	0	0	0	0	7
0:30	4	0	0	0	0	0	4
0:45	0	0	0	1	0	0	1
1:00	3	0	0	0	0	0	3
1:15	4	0	0	0	0	0	4
1:30	0	0	0	1	0	0	1
1:45	2	0	0	1	0	0	3
2:00	1	0	0	0	0	0	1
2:15	1	0	0	1	0	0	2
2:30	1	0	0	0	0	0	1
2:45	1	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0
3:15	2	1	0	0	0	0	3
3:30	4	0	0	1	0	0	5
3:45	4	1	0	0	0	0	5
4:00	0	0	0	0	0	0	0
4:15	2	0	0	0	0	0	2
4:30	3	0	0	0	0	0	3
4:45	8	0	0	0	0	0	8
5:00	2	3	0	0	0	0	5
5:15	5	0	0	0	0	0	5
5:30	10	2	0	0	0	0	12
5:45	8	0	0	0	0	0	8
6:00	4	0	0	2	0	0	6
6:15	14	0	0	0	0	0	14
6:30	18	0	0	0	0	0	18
6:45	26	2	3	0	0	0	31
7:00	23	1	1	0	1	0	26
7:15	35	2	0	0	0	0	37
7:30	30	2	0	0	0	0	32
7:45	46	1	0	1	0	0	48
8:00	34	1	0	0	0	0	35
8:15	42	1	0	2	0	0	45
8:30	52	0	1	2	0	0	55
8:45	68	0	0	1	0	0	69
9:00	75	1	1	3	0	1	81
9:15	72	2	0	0	0	0	74
9:30	76	2	0	1	0	0	79
9:45	85	2	0	2	0	0	89
10:00	90	3	0	1	0	0	94
10:15	81	2	0	1	0	1	85
10:30	92	4	2	1	0	0	99
10:45	97	3	1	0	0	0	101
11:00	96	1	0	0	0	0	97
11:15	108	1	0	1	0	0	110
11:30	77	3	0	1	0	1	82
11:45	98	1	0	0	0	1	100
TOTAL	1,520	42	9	24	1	4	1,600

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	407

PM	COMBINED						
Time	1	2	3	4	5	6	TOTAL
12:00	110	0	0	0	0	0	110
12:15	111	4	0	0	0	0	115
12:30	121	0	0	0	0	0	121
12:45	113	5	0	1	0	0	119
13:00	109	0	0	0	0	0	109
13:15	119	0	0	0	1	0	120
13:30	93	2	1	1	0	0	97
13:45	107	2	2	2	0	0	113
14:00	101	1	0	0	0	0	102
14:15	118	3	0	0	0	0	121
14:30	87	2	2	0	0	0	91
14:45	124	3	1	0	0	0	128
15:00	95	1	0	0	0	0	96
15:15	111	0	0	0	0	0	111
15:30	130	3	0	0	0	0	133
15:45	124	2	0	0	0	0	126
16:00	99	1	0	0	0	0	100
16:15	121	1	1	0	0	0	123
16:30	122	0	1	1	0	0	124
16:45	122	2	0	0	0	0	124
17:00	109	1	0	0	0	0	110
17:15	106	0	0	1	0	0	107
17:30	101	0	0	0	0	0	101
17:45	115	2	0	0	0	0	117
18:00	106	3	1	1	0	0	111
18:15	114	1	0	0	0	0	115
18:30	121	1	0	0	0	0	122
18:45	81	0	0	1	0	0	82
19:00	85	2	0	0	0	0	87
19:15	95	0	0	0	0	0	95
19:30	84	1	0	0	0	0	85
19:45	76	0	0	0	0	0	76
20:00	84	0	0	0	0	0	84
20:15	78	0	0	1	0	0	79
20:30	65	0	0	0	0	0	65
20:45	60	0	0	0	0	0	60
21:00	47	0	0	0	0	0	47
21:15	29	0	0	0	0	0	29
21:30	28	0	0	1	0	0	29
21:45	29	0	0	1	0	0	30
22:00	26	0	0	0	0	0	26
22:15	15	0	0	2	0	0	17
22:30	19	0	0	0	0	0	19
22:45	16	1	0	1	0	0	18
23:00	21	0	0	0	0	0	21
23:15	11	0	0	0	0	0	11
23:30	4	0	0	0	0	0	4
23:45	3	0	0	0	0	0	3
TOTAL	3,965	44	9	14	1	0	4,033

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	482

TOTAL: AM+PM	5,485	86	18	38	2	4	5,633
% OF TOTAL	97.4%	1.5%	0.3%	0.7%	0.0%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY2 Middle dwy south of Bear Valley Rd (west of Mall Blvd)

AM	IN							PM	IN						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	0	0	0	0	0	0	0
0:15	1	0	0	0	0	0	1	12:15	2	0	0	0	0	0	2
0:30	0	0	0	0	0	0	0	12:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0	12:45	2	0	0	0	0	0	2
1:00	0	0	0	0	0	0	0	13:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0	13:15	3	0	0	0	0	0	3
1:30	0	0	0	0	0	0	0	13:30	2	0	0	0	0	0	2
1:45	0	0	0	0	0	0	0	13:45	3	1	0	0	0	0	4
2:00	0	0	0	0	0	0	0	14:00	2	0	0	0	0	0	2
2:15	0	0	0	0	0	0	0	14:15	0	1	0	0	0	0	1
2:30	0	0	0	0	0	0	0	14:30	1	0	0	0	0	0	1
2:45	0	0	0	0	0	0	0	14:45	1	0	0	0	0	0	1
3:00	0	0	0	0	0	0	0	15:00	2	0	0	0	0	0	2
3:15	0	0	0	0	0	0	0	15:15	1	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	15:30	1	0	0	0	0	0	1
3:45	2	0	0	0	0	0	2	15:45	3	0	0	0	0	0	3
4:00	0	1	0	0	0	0	1	16:00	2	0	0	0	0	0	2
4:15	0	0	0	0	0	0	0	16:15	1	0	0	0	0	0	1
4:30	0	0	0	0	0	0	0	16:30	1	0	0	0	0	0	1
4:45	1	0	0	0	0	0	1	16:45	2	0	0	0	0	0	2
5:00	0	0	0	0	0	0	0	17:00	1	0	0	0	0	0	1
5:15	0	0	0	0	0	0	0	17:15	3	0	0	0	0	0	3
5:30	0	0	0	0	0	0	0	17:30	1	0	0	0	0	0	1
5:45	0	0	0	0	0	0	0	17:45	3	0	0	0	0	0	3
6:00	0	0	0	0	0	0	0	18:00	3	0	0	0	0	0	3
6:15	1	0	0	0	0	0	1	18:15	1	0	0	0	0	0	1
6:30	0	0	0	0	0	0	0	18:30	3	0	0	0	0	0	3
6:45	1	0	0	0	0	0	1	18:45	3	0	0	0	0	0	3
7:00	0	0	0	0	0	0	0	19:00	4	0	0	0	0	0	4
7:15	0	0	0	0	0	0	0	19:15	2	0	0	0	0	0	2
7:30	0	0	0	0	0	0	0	19:30	1	0	0	0	0	0	1
7:45	1	0	0	0	0	0	1	19:45	2	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	20:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	20:15	1	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	20:45	0	0	0	0	0	0	0
9:00	2	0	0	0	0	0	2	21:00	0	0	0	0	0	0	0
9:15	2	0	0	0	0	0	2	21:15	2	0	0	0	0	0	2
9:30	2	0	0	0	1	0	3	21:30	1	0	0	0	0	0	1
9:45	1	0	0	0	0	0	1	21:45	0	0	0	0	0	0	0
10:00	1	0	0	0	0	0	1	22:00	0	0	0	0	0	0	0
10:15	2	0	0	0	0	0	2	22:15	0	0	0	0	0	0	0
10:30	5	0	0	0	0	0	5	22:30	0	0	0	0	0	0	0
10:45	2	0	0	0	0	0	2	22:45	0	0	0	0	0	0	0
11:00	2	0	0	0	0	0	2	23:00	0	0	0	0	0	0	0
11:15	5	0	0	0	0	0	5	23:15	0	0	0	0	0	0	0
11:30	2	0	0	0	0	0	2	23:30	0	0	0	0	0	0	0
11:45	2	0	0	0	0	0	2	23:45	0	0	0	0	0	0	0
TOTAL	35	1	0	0	1	0	37	TOTAL	62	2	0	0	0	0	64

AM PEAK HOUR	10:30 AM	AM PEAK HOUR	6:30 PM
AM PEAK VOLUME	14	AM PEAK VOLUME	12

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	97	3	0	0	1	0	101
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.0%	3.0%	0.0%	0.0%	1.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	335	10	0	1	1	0	347
CLASS 6	Buses	% OF TOTAL	96.5%	2.9%	0.0%	0.3%	0.3%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY2 Middle dwy south of Bear Valley Rd (west of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	1	0	0	0	0	0	1
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	0	0	0	0	0	0
6:30	1	0	0	0	0	0	1
6:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0
9:15	1	0	0	0	0	0	1
9:30	2	0	0	0	0	0	2
9:45	3	0	0	0	0	0	3
10:00	2	0	0	0	0	0	2
10:15	3	0	0	0	0	0	3
10:30	4	0	0	0	0	0	4
10:45	5	1	0	0	0	0	6
11:00	1	0	0	0	0	0	1
11:15	4	0	0	0	0	0	4
11:30	7	0	0	0	0	0	7
11:45	5	0	0	0	0	0	5
TOTAL	40	1	0	0	0	0	41

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	18

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	2	0	0	0	0	0	2
12:15	5	0	0	0	0	0	5
12:30	5	0	0	1	0	0	6
12:45	6	0	0	0	0	0	6
13:00	10	0	0	0	0	0	10
13:15	4	0	0	0	0	0	4
13:30	10	0	0	0	0	0	10
13:45	4	0	0	0	0	0	4
14:00	3	1	0	0	0	0	4
14:15	5	1	0	0	0	0	6
14:30	11	0	0	0	0	0	11
14:45	3	1	0	0	0	0	4
15:00	5	0	0	0	0	0	5
15:15	5	0	0	0	0	0	5
15:30	3	0	0	0	0	0	3
15:45	5	1	0	0	0	0	6
16:00	6	0	0	0	0	0	6
16:15	3	0	0	0	0	0	3
16:30	3	0	0	0	0	0	3
16:45	3	0	0	0	0	0	3
17:00	6	0	0	0	0	0	6
17:15	8	0	0	0	0	0	8
17:30	6	1	0	0	0	0	7
17:45	4	0	0	0	0	0	4
18:00	12	0	0	0	0	0	12
18:15	5	0	0	0	0	0	5
18:30	6	0	0	0	0	0	6
18:45	7	0	0	0	0	0	7
19:00	9	0	0	0	0	0	9
19:15	2	0	0	0	0	0	2
19:30	2	0	0	0	0	0	2
19:45	0	0	0	0	0	0	0
20:00	9	0	0	0	0	0	9
20:15	4	0	0	0	0	0	4
20:30	3	0	0	0	0	0	3
20:45	6	0	0	0	0	0	6
21:00	0	1	0	0	0	0	1
21:15	1	0	0	0	0	0	1
21:30	1	0	0	0	0	0	1
21:45	1	0	0	0	0	0	1
22:00	3	0	0	0	0	0	3
22:15	0	0	0	0	0	0	0
22:30	2	0	0	0	0	0	2
22:45	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0
23:15	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	198	6	0	1	0	0	205

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	31

TOTAL: AM+PM	238	7	0	1	0	0	246
% OF TOTAL	96.7%	2.8%	0.0%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY2 Middle dwy south of Bear Valley Rd (west of Mall Blvd)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	2	0	0	0	0	0	2
0:15	1	0	0	0	0	0	1	12:15	7	0	0	0	0	0	7
0:30	0	0	0	0	0	0	0	12:30	6	0	0	1	0	0	7
0:45	0	0	0	0	0	0	0	12:45	8	0	0	0	0	0	8
1:00	0	0	0	0	0	0	0	13:00	11	0	0	0	0	0	11
1:15	0	0	0	0	0	0	0	13:15	7	0	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	12	0	0	0	0	0	12
1:45	0	0	0	0	0	0	0	13:45	7	1	0	0	0	0	8
2:00	0	0	0	0	0	0	0	14:00	5	1	0	0	0	0	6
2:15	0	0	0	0	0	0	0	14:15	5	2	0	0	0	0	7
2:30	0	0	0	0	0	0	0	14:30	12	0	0	0	0	0	12
2:45	0	0	0	0	0	0	0	14:45	4	1	0	0	0	0	5
3:00	0	0	0	0	0	0	0	15:00	7	0	0	0	0	0	7
3:15	0	0	0	0	0	0	0	15:15	6	0	0	0	0	0	6
3:30	0	0	0	0	0	0	0	15:30	4	0	0	0	0	0	4
3:45	2	0	0	0	0	0	2	15:45	8	1	0	0	0	0	9
4:00	0	1	0	0	0	0	1	16:00	8	0	0	0	0	0	8
4:15	0	0	0	0	0	0	0	16:15	4	0	0	0	0	0	4
4:30	0	0	0	0	0	0	0	16:30	4	0	0	0	0	0	4
4:45	2	0	0	0	0	0	2	16:45	5	0	0	0	0	0	5
5:00	0	0	0	0	0	0	0	17:00	7	0	0	0	0	0	7
5:15	0	0	0	0	0	0	0	17:15	11	0	0	0	0	0	11
5:30	0	0	0	0	0	0	0	17:30	7	1	0	0	0	0	8
5:45	0	0	0	0	0	0	0	17:45	7	0	0	0	0	0	7
6:00	1	0	0	0	0	0	1	18:00	15	0	0	0	0	0	15
6:15	1	0	0	0	0	0	1	18:15	6	0	0	0	0	0	6
6:30	1	0	0	0	0	0	1	18:30	9	0	0	0	0	0	9
6:45	1	0	0	0	0	0	1	18:45	10	0	0	0	0	0	10
7:00	0	0	0	0	0	0	0	19:00	13	0	0	0	0	0	13
7:15	0	0	0	0	0	0	0	19:15	4	0	0	0	0	0	4
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	1	0	0	0	0	0	1	19:45	2	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	20:00	9	0	0	0	0	0	9
8:15	0	0	0	0	0	0	0	20:15	5	0	0	0	0	0	5
8:30	0	0	0	0	0	0	0	20:30	3	0	0	0	0	0	3
8:45	0	0	0	0	0	0	0	20:45	6	0	0	0	0	0	6
9:00	2	0	0	0	0	0	2	21:00	0	1	0	0	0	0	1
9:15	3	0	0	0	0	0	3	21:15	3	0	0	0	0	0	3
9:30	4	0	0	0	1	0	5	21:30	2	0	0	0	0	0	2
9:45	4	0	0	0	0	0	4	21:45	1	0	0	0	0	0	1
10:00	3	0	0	0	0	0	3	22:00	3	0	0	0	0	0	3
10:15	5	0	0	0	0	0	5	22:15	0	0	0	0	0	0	0
10:30	9	0	0	0	0	0	9	22:30	2	0	0	0	0	0	2
10:45	7	1	0	0	0	0	8	22:45	0	0	0	0	0	0	0
11:00	3	0	0	0	0	0	3	23:00	0	0	0	0	0	0	0
11:15	9	0	0	0	0	0	9	23:15	0	0	0	0	0	0	0
11:30	9	0	0	0	0	0	9	23:30	0	0	0	0	0	0	0
11:45	7	0	0	0	0	0	7	23:45	0	0	0	0	0	0	0
TOTAL	75	2	0	0	1	0	78	**TOTAL**	260	8	0	1	0	0	269

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	29

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	41

TOTAL: AM+PM	335	10	0	1	1	0	347
% OF TOTAL	96.5%	2.9%	0.0%	0.3%	0.3%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY3 Estern dwy south of Bear Valley Rd (west of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	99	4	0	1	0	1	105
0:15	4	0	0	0	0	0	4	12:15	99	1	1	0	0	1	102
0:30	1	0	0	0	0	0	1	12:30	106	5	1	2	0	1	115
0:45	1	0	0	1	0	0	2	12:45	93	1	0	0	0	0	94
1:00	1	0	0	0	0	0	1	13:00	92	3	0	0	0	1	96
1:15	4	0	0	1	0	0	5	13:15	81	2	0	0	0	1	84
1:30	1	0	0	0	0	0	1	13:30	101	1	0	1	0	0	103
1:45	1	0	0	0	0	0	1	13:45	83	2	0	1	0	0	86
2:00	0	0	0	0	0	0	0	14:00	76	6	0	1	0	1	84
2:15	1	0	0	0	0	0	1	14:15	79	0	2	0	0	1	82
2:30	3	0	0	1	0	0	4	14:30	80	2	2	2	0	1	87
2:45	1	0	0	2	0	0	3	14:45	79	3	0	1	0	0	83
3:00	0	0	0	0	0	0	0	15:00	74	2	0	0	0	0	76
3:15	0	0	0	0	0	0	0	15:15	96	2	0	0	0	1	99
3:30	2	0	0	0	0	0	2	15:30	79	1	0	0	0	1	81
3:45	3	0	0	0	0	0	3	15:45	99	1	0	1	0	1	102
4:00	0	0	0	0	0	0	0	16:00	89	2	0	0	0	0	91
4:15	3	0	0	0	0	0	3	16:15	77	2	0	2	0	1	82
4:30	2	0	0	0	0	0	2	16:30	76	3	0	0	0	0	79
4:45	16	0	0	0	0	0	16	16:45	102	3	0	0	0	1	106
5:00	7	1	0	0	0	0	8	17:00	99	2	0	0	0	1	102
5:15	6	0	0	0	0	0	6	17:15	96	0	0	0	0	0	96
5:30	6	1	0	0	0	0	7	17:30	81	4	0	0	0	0	85
5:45	10	2	0	0	0	0	12	17:45	110	1	0	1	1	1	114
6:00	14	1	1	0	0	1	17	18:00	100	0	0	0	0	0	100
6:15	13	1	0	0	0	0	14	18:15	83	0	0	0	0	1	84
6:30	14	2	1	0	0	0	17	18:30	67	0	0	0	0	0	67
6:45	18	0	0	1	0	0	19	18:45	103	0	1	0	0	0	104
7:00	14	1	1	2	0	1	19	19:00	77	2	0	0	0	0	79
7:15	24	2	0	0	0	0	26	19:15	73	0	0	0	0	1	74
7:30	30	1	0	0	0	0	31	19:30	68	0	0	0	0	0	68
7:45	33	3	0	0	0	0	36	19:45	59	1	0	1	0	0	61
8:00	31	2	0	1	0	1	35	20:00	50	0	0	0	0	0	50
8:15	40	2	1	1	0	0	44	20:15	49	0	0	0	0	1	50
8:30	51	3	0	0	0	0	54	20:30	41	0	0	0	0	0	41
8:45	58	0	0	3	0	0	61	20:45	34	0	0	0	0	0	34
9:00	86	6	3	1	0	1	97	21:00	28	0	0	0	0	1	29
9:15	63	4	0	1	0	0	68	21:15	21	0	0	1	0	0	22
9:30	67	1	0	0	0	1	69	21:30	20	0	0	0	0	0	20
9:45	73	2	0	0	0	0	75	21:45	20	1	0	0	0	0	21
10:00	76	3	1	0	0	1	81	22:00	11	0	0	0	0	0	11
10:15	89	3	1	0	0	0	93	22:15	9	1	0	0	0	0	10
10:30	79	0	0	0	0	0	79	22:30	8	0	0	0	0	0	8
10:45	106	3	1	0	0	1	111	22:45	6	0	0	0	0	0	6
11:00	104	2	0	0	0	2	108	23:00	4	0	0	0	0	0	4
11:15	78	1	0	1	0	1	81	23:15	1	0	0	0	0	0	1
11:30	88	2	1	0	0	0	91	23:30	1	0	0	0	0	0	1
11:45	90	1	0	0	0	0	91	23:45	2	0	0	0	0	0	2
TOTAL	1,412	50	11	16	0	10	1,499	**TOTAL**	3,081	58	7	15	1	19	3,181

AM PEAK HOUR	10:45 AM	**AM PEAK HOUR**	12:00 PM
AM PEAK VOLUME	391	**AM PEAK VOLUME**	416

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	4,493	108	18	31	1	29	4,680
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	96.0%	2.3%	0.4%	0.7%	0.0%	0.6%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	8,661	200	32	52	3	59	9,007
CLASS 6	Buses	**% OF TOTAL**	96.2%	2.2%	0.4%	0.6%	0.0%	0.7%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY3 Estern dwy south of Bear Valley Rd (west of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	7	0	0	0	0	0	7
0:15	5	0	0	0	0	0	5
0:30	6	0	0	0	0	0	6
0:45	5	0	0	0	0	0	5
1:00	0	0	0	0	0	0	0
1:15	2	0	0	0	0	0	2
1:30	1	0	0	0	0	0	1
1:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1
2:15	1	0	0	0	0	0	1
2:30	2	0	0	0	0	0	2
2:45	1	2	0	0	0	0	3
3:00	1	0	0	0	0	0	1
3:15	1	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0
3:45	1	0	0	0	0	0	1
4:00	0	0	0	0	0	0	0
4:15	1	1	0	0	0	0	2
4:30	2	0	0	0	0	0	2
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	2	0	0	0	0	0	2
5:30	4	0	0	0	0	0	4
5:45	1	0	0	0	0	0	1
6:00	5	1	0	0	0	0	6
6:15	7	0	0	0	0	0	7
6:30	11	0	0	0	0	0	11
6:45	15	2	0	0	0	1	18
7:00	17	0	0	0	0	0	17
7:15	8	1	3	1	0	0	13
7:30	18	3	0	0	0	0	21
7:45	22	2	0	1	1	1	27
8:00	26	0	0	0	0	0	26
8:15	18	0	0	0	0	0	18
8:30	19	3	0	0	0	0	22
8:45	27	0	0	2	0	1	30
9:00	48	1	0	1	0	0	50
9:15	33	2	1	0	0	1	37
9:30	50	0	1	1	0	0	52
9:45	58	5	1	1	0	0	65
10:00	67	1	0	0	0	1	69
10:15	57	1	0	1	0	0	59
10:30	71	1	0	0	0	1	73
10:45	66	4	1	0	0	1	72
11:00	69	1	1	0	0	1	72
11:15	67	0	0	0	0	0	67
11:30	90	2	0	0	0	0	92
11:45	73	1	0	0	0	1	75
TOTAL	986	34	8	8	1	9	1,046

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	306

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	80	2	0	0	0	2	84
12:15	88	4	0	1	0	1	94
12:30	101	2	1	0	0	0	104
12:45	90	2	0	1	0	0	93
13:00	89	4	0	0	0	1	94
13:15	87	1	0	1	0	2	91
13:30	87	3	2	1	0	0	93
13:45	74	2	0	0	0	0	76
14:00	78	3	0	1	1	2	85
14:15	84	4	0	2	0	1	91
14:30	78	2	0	0	0	0	80
14:45	72	1	1	0	0	0	74
15:00	77	4	1	1	0	1	84
15:15	81	2	0	0	0	1	84
15:30	76	0	0	0	0	1	77
15:45	82	2	0	0	0	0	84
16:00	79	1	0	0	0	1	81
16:15	86	2	0	1	0	0	89
16:30	60	2	0	1	0	1	64
16:45	85	0	0	0	0	1	86
17:00	90	3	0	1	0	1	95
17:15	102	2	0	0	0	0	104
17:30	67	2	0	0	0	0	69
17:45	93	2	0	0	0	1	96
18:00	85	1	0	0	0	1	87
18:15	88	1	1	0	0	0	90
18:30	83	0	0	0	0	0	83
18:45	92	0	0	0	0	1	93
19:00	94	0	0	0	0	0	94
19:15	63	0	0	0	0	0	63
19:30	78	1	0	1	0	0	80
19:45	60	1	0	0	0	0	61
20:00	76	0	0	0	0	1	77
20:15	56	0	0	0	0	0	56
20:30	54	0	0	0	0	0	54
20:45	64	0	0	0	0	0	64
21:00	46	1	0	1	0	1	49
21:15	53	0	0	0	0	0	53
21:30	46	0	0	0	0	0	46
21:45	30	0	0	0	0	0	30
22:00	27	1	0	0	0	0	28
22:15	19	0	0	0	0	0	19
22:30	24	0	0	0	0	0	24
22:45	18	0	0	0	0	0	18
23:00	14	0	0	0	0	0	14
23:15	10	0	0	0	0	0	10
23:30	6	0	0	0	0	0	6
23:45	10	0	0	0	0	0	10
TOTAL	3,182	58	6	13	1	21	3,281

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	385

TOTAL: AM+PM	4,168	92	14	21	2	30	4,327
% OF TOTAL	96.3%	2.1%	0.3%	0.5%	0.0%	0.7%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY3 Estern dwy south of Bear Valley Rd (west of Mall Blvd)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	7	0	0	0	0	0	7	12:00	179	6	0	1	0	3	189
0:15	9	0	0	0	0	0	9	12:15	187	5	1	1	0	2	196
0:30	7	0	0	0	0	0	7	12:30	207	7	2	2	0	1	219
0:45	6	0	0	1	0	0	7	12:45	183	3	0	1	0	0	187
1:00	1	0	0	0	0	0	1	13:00	181	7	0	0	0	2	190
1:15	6	0	0	1	0	0	7	13:15	168	3	0	1	0	3	175
1:30	2	0	0	0	0	0	2	13:30	188	4	2	2	0	0	196
1:45	1	0	0	0	0	0	1	13:45	157	4	0	1	0	0	162
2:00	1	0	0	0	0	0	1	14:00	154	9	0	2	1	3	169
2:15	2	0	0	0	0	0	2	14:15	163	4	2	2	0	2	173
2:30	5	0	0	1	0	0	6	14:30	158	4	2	2	0	1	167
2:45	2	2	0	2	0	0	6	14:45	151	4	1	1	0	0	157
3:00	1	0	0	0	0	0	1	15:00	151	6	1	1	0	1	160
3:15	1	0	0	0	0	0	1	15:15	177	4	0	0	0	2	183
3:30	2	0	0	0	0	0	2	15:30	155	1	0	0	0	2	158
3:45	4	0	0	0	0	0	4	15:45	181	3	0	1	0	1	186
4:00	0	0	0	0	0	0	0	16:00	168	3	0	0	0	1	172
4:15	4	1	0	0	0	0	5	16:15	163	4	0	3	0	1	171
4:30	4	0	0	0	0	0	4	16:30	136	5	0	1	0	1	143
4:45	16	0	0	0	0	0	16	16:45	187	3	0	0	0	2	192
5:00	7	1	0	0	0	0	8	17:00	189	5	0	1	0	2	197
5:15	8	0	0	0	0	0	8	17:15	198	2	0	0	0	0	200
5:30	10	1	0	0	0	0	11	17:30	148	6	0	0	0	0	154
5:45	11	2	0	0	0	0	13	17:45	203	3	0	1	1	2	210
6:00	19	2	1	0	0	1	23	18:00	185	1	0	0	0	1	187
6:15	20	1	0	0	0	0	21	18:15	171	1	1	0	0	1	174
6:30	25	2	1	0	0	0	28	18:30	150	0	0	0	0	0	150
6:45	33	2	0	1	0	1	37	18:45	195	0	1	0	0	1	197
7:00	31	1	1	2	0	1	36	19:00	171	2	0	0	0	0	173
7:15	32	3	3	1	0	0	39	19:15	136	0	0	0	0	1	137
7:30	48	4	0	0	0	0	52	19:30	146	1	0	1	0	0	148
7:45	55	5	0	1	1	1	63	19:45	119	2	0	1	0	0	122
8:00	57	2	0	1	0	1	61	20:00	126	0	0	0	0	1	127
8:15	58	2	1	1	0	0	62	20:15	105	0	0	0	0	1	106
8:30	70	6	0	0	0	0	76	20:30	95	0	0	0	0	0	95
8:45	85	0	0	5	0	1	91	20:45	98	0	0	0	0	0	98
9:00	134	7	3	2	0	1	147	21:00	74	1	0	1	0	2	78
9:15	96	6	1	1	0	1	105	21:15	74	0	0	1	0	0	75
9:30	117	1	1	1	0	1	121	21:30	66	0	0	0	0	0	66
9:45	131	7	1	1	0	0	140	21:45	50	1	0	0	0	0	51
10:00	143	4	1	0	0	2	150	22:00	38	1	0	0	0	0	39
10:15	146	4	1	1	0	0	152	22:15	28	1	0	0	0	0	29
10:30	150	1	0	0	0	1	152	22:30	32	0	0	0	0	0	32
10:45	172	7	2	0	0	2	183	22:45	24	0	0	0	0	0	24
11:00	173	3	1	0	0	3	180	23:00	18	0	0	0	0	0	18
11:15	145	1	0	1	0	1	148	23:15	11	0	0	0	0	0	11
11:30	178	4	1	0	0	0	183	23:30	7	0	0	0	0	0	7
11:45	163	2	0	0	0	1	166	23:45	12	0	0	0	0	0	12
TOTAL	2,398	84	19	24	1	19	2,545	TOTAL	6,263	116	13	28	2	40	6,462

AM PEAK HOUR	10:45 AM	AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	694	AM PEAK VOLUME	792

TOTAL: AM+PM	8,661	200	32	52	3	59	9,007
% OF TOTAL	96.2%	2.2%	0.4%	0.6%	0.0%	0.7%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY4 Western dwy south of Bear Valley Rd (east of Mall Blvd

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	16	0	0	0	0	0	16
0:15	0	0	0	0	0	0	0	12:15	9	3	0	0	0	0	12
0:30	0	0	0	0	0	0	0	12:30	13	0	0	0	0	0	13
0:45	0	0	0	0	0	0	0	12:45	11	0	0	0	0	0	11
1:00	0	0	0	0	0	0	0	13:00	14	0	0	0	0	0	14
1:15	0	0	0	0	0	0	0	13:15	6	0	0	0	0	0	6
1:30	0	0	0	0	0	0	0	13:30	11	0	0	0	0	0	11
1:45	0	0	0	0	0	0	0	13:45	10	0	0	0	0	0	10
2:00	0	0	0	0	0	0	0	14:00	5	0	0	0	0	0	5
2:15	0	0	0	0	0	0	0	14:15	7	1	0	0	0	0	8
2:30	0	0	0	0	0	0	0	14:30	15	1	0	0	0	0	16
2:45	0	0	0	0	0	0	0	14:45	16	0	0	0	0	0	16
3:00	0	0	0	0	0	0	0	15:00	5	0	0	0	0	0	5
3:15	0	0	0	0	0	0	0	15:15	10	0	0	0	0	0	10
3:30	0	0	0	0	0	0	0	15:30	12	0	0	0	0	0	12
3:45	0	0	0	0	0	0	0	15:45	14	1	0	0	0	0	15
4:00	0	0	0	0	0	0	0	16:00	10	0	0	1	0	0	11
4:15	0	0	0	0	0	0	0	16:15	7	0	0	0	0	0	7
4:30	1	0	0	0	0	0	1	16:30	15	0	0	0	0	0	15
4:45	0	0	0	0	0	0	0	16:45	25	0	0	0	0	0	25
5:00	1	0	0	0	0	0	1	17:00	15	0	0	0	0	0	15
5:15	0	0	0	0	0	0	0	17:15	13	0	0	0	0	0	13
5:30	0	0	0	0	0	0	0	17:30	17	0	0	0	0	0	17
5:45	2	0	0	0	0	0	2	17:45	10	0	0	0	0	0	10
6:00	1	0	0	0	0	0	1	18:00	6	0	0	0	0	0	6
6:15	2	0	0	0	0	0	2	18:15	7	0	0	0	0	0	7
6:30	2	0	0	0	0	0	2	18:30	5	0	0	0	0	0	5
6:45	1	0	0	0	0	0	1	18:45	7	0	0	0	0	0	7
7:00	1	0	0	0	0	0	1	19:00	6	0	0	0	0	0	6
7:15	1	0	0	0	0	0	1	19:15	1	0	0	0	0	0	1
7:30	1	0	0	0	0	0	1	19:30	9	0	0	0	0	0	9
7:45	4	0	0	0	0	0	4	19:45	7	0	0	0	0	0	7
8:00	4	0	0	0	0	0	4	20:00	6	0	0	0	0	0	6
8:15	4	0	0	0	0	0	4	20:15	4	0	0	0	0	0	4
8:30	5	1	0	0	0	0	6	20:30	3	0	0	0	0	0	3
8:45	4	0	0	0	0	0	4	20:45	5	0	0	0	0	0	5
9:00	5	0	1	0	0	0	6	21:00	1	0	0	0	0	0	1
9:15	5	0	0	0	0	0	5	21:15	0	0	0	0	0	0	0
9:30	9	0	0	0	0	0	9	21:30	2	0	0	0	0	0	2
9:45	4	0	0	0	0	0	4	21:45	0	0	0	0	0	0	0
10:00	8	0	0	0	0	0	8	22:00	1	0	0	0	0	0	1
10:15	7	1	0	0	0	0	8	22:15	0	0	0	0	0	0	0
10:30	7	0	0	0	0	0	7	22:30	0	0	0	1	0	0	1
10:45	8	0	0	0	0	0	8	22:45	0	0	0	0	0	0	0
11:00	15	0	0	0	0	0	15	23:00	0	0	0	0	0	0	0
11:15	9	0	0	0	0	0	9	23:15	1	0	0	0	0	0	1
11:30	8	1	0	0	0	0	9	23:30	0	0	0	0	0	0	0
11:45	11	0	0	0	0	0	11	23:45	0	0	0	0	0	0	0
TOTAL	130	3	1	0	0	0	134	TOTAL	357	6	0	2	0	0	365

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	44	AM PEAK VOLUME	70

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	487	9	1	2	0	0	499
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	97.6%	1.8%	0.2%	0.4%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	935	30	3	10	0	0	978
CLASS 6	Buses	% OF TOTAL	95.6%	3.1%	0.3%	1.0%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY4 Western dwy south of Bear Valley Rd (east of Mall Blvd

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	1	0	0	1
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	3	0	0	3
3:30	0	0	0	1	0	0	1
3:45	0	2	0	0	0	0	2
4:00	1	0	0	0	0	0	1
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	1	0	0	0	0	0	1
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	1	0	0	0	0	1
6:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	1	0	0	0	0	0	1
7:00	1	1	0	1	0	0	3
7:15	2	0	0	0	0	0	2
7:30	0	0	0	0	0	0	0
7:45	3	0	0	0	0	0	3
8:00	3	1	0	0	0	0	4
8:15	4	1	0	0	0	0	5
8:30	3	0	0	0	0	0	3
8:45	2	1	0	0	0	0	3
9:00	5	0	0	0	0	0	5
9:15	7	0	0	1	0	0	8
9:30	5	1	0	0	0	0	6
9:45	5	1	0	0	0	0	6
10:00	5	0	0	0	0	0	5
10:15	7	0	0	0	0	0	7
10:30	10	0	0	0	0	0	10
10:45	8	0	0	0	0	0	8
11:00	14	0	1	0	0	0	15
11:15	13	0	1	0	0	0	14
11:30	12	0	0	0	0	0	12
11:45	8	1	0	0	0	0	9
TOTAL	120	10	2	7	0	0	139

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	50

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	7	0	0	0	0	0	7
12:15	13	0	0	0	0	0	13
12:30	12	1	0	0	0	0	13
12:45	8	1	0	0	0	0	9
13:00	19	1	0	0	0	0	20
13:15	13	0	0	0	0	0	13
13:30	9	1	0	0	0	0	10
13:45	13	0	0	0	0	0	13
14:00	14	0	0	0	0	0	14
14:15	7	0	0	0	0	0	7
14:30	9	0	0	0	0	0	9
14:45	8	2	0	0	0	0	10
15:00	6	0	0	0	0	0	6
15:15	7	0	0	0	0	0	7
15:30	16	1	0	0	0	0	17
15:45	12	0	0	0	0	0	12
16:00	9	0	0	0	0	0	9
16:15	4	0	0	0	0	0	4
16:30	6	0	0	0	0	0	6
16:45	10	0	0	0	0	0	10
17:00	9	1	0	0	0	0	10
17:15	9	1	0	0	0	0	10
17:30	13	0	0	0	0	0	13
17:45	8	1	0	0	0	0	9
18:00	11	0	0	0	0	0	11
18:15	6	0	0	0	0	0	6
18:30	1	0	0	0	0	0	1
18:45	10	0	0	0	0	0	10
19:00	7	0	0	0	0	0	7
19:15	11	0	0	0	0	0	11
19:30	9	0	0	0	0	0	9
19:45	4	0	0	0	0	0	4
20:00	6	0	0	0	0	0	6
20:15	7	0	0	0	0	0	7
20:30	3	1	0	0	0	0	4
20:45	1	0	0	0	0	0	1
21:00	2	0	0	0	0	0	2
21:15	2	0	0	0	0	0	2
21:30	1	0	0	1	0	0	2
21:45	0	0	0	0	0	0	0
22:00	1	0	0	0	0	0	1
22:15	0	0	0	0	0	0	0
22:30	1	0	0	0	0	0	1
22:45	0	0	0	0	0	0	0
23:00	3	0	0	0	0	0	3
23:15	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0
23:45	1	0	0	0	0	0	1
TOTAL	328	11	0	1	0	0	340

AM PEAK HOUR	1:00 PM
AM PEAK VOLUME	56

TOTAL: AM+PM		448	21	2	8	0	0	479
% OF TOTAL		93.5%	4.4%	0.4%	1.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY4 Western dwy south of Bear Valley Rd (east of Mall Blvd

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	23	0	0	0	0	0	23
0:15	0	0	0	0	0	0	0	12:15	22	3	0	0	0	0	25
0:30	0	0	0	0	0	0	0	12:30	25	1	0	0	0	0	26
0:45	0	0	0	0	0	0	0	12:45	19	1	0	0	0	0	20
1:00	0	0	0	0	0	0	0	13:00	33	1	0	0	0	0	34
1:15	0	0	0	0	0	0	0	13:15	19	0	0	0	0	0	19
1:30	0	0	0	0	0	0	0	13:30	20	1	0	0	0	0	21
1:45	0	0	0	0	0	0	0	13:45	23	0	0	0	0	0	23
2:00	0	0	0	0	0	0	0	14:00	19	0	0	0	0	0	19
2:15	0	0	0	0	0	0	0	14:15	14	1	0	0	0	0	15
2:30	0	0	0	1	0	0	1	14:30	24	1	0	0	0	0	25
2:45	0	0	0	0	0	0	0	14:45	24	2	0	0	0	0	26
3:00	0	0	0	0	0	0	0	15:00	11	0	0	0	0	0	11
3:15	0	0	0	3	0	0	3	15:15	17	0	0	0	0	0	17
3:30	0	0	0	1	0	0	1	15:30	28	1	0	0	0	0	29
3:45	0	2	0	0	0	0	2	15:45	26	1	0	0	0	0	27
4:00	1	0	0	0	0	0	1	16:00	19	0	0	1	0	0	20
4:15	0	0	0	0	0	0	0	16:15	11	0	0	0	0	0	11
4:30	1	0	0	0	0	0	1	16:30	21	0	0	0	0	0	21
4:45	0	0	0	0	0	0	0	16:45	35	0	0	0	0	0	35
5:00	2	0	0	0	0	0	2	17:00	24	1	0	0	0	0	25
5:15	0	0	0	0	0	0	0	17:15	22	1	0	0	0	0	23
5:30	0	0	0	0	0	0	0	17:30	30	0	0	0	0	0	30
5:45	2	1	0	0	0	0	3	17:45	18	1	0	0	0	0	19
6:00	1	0	0	0	0	0	1	18:00	17	0	0	0	0	0	17
6:15	2	0	0	0	0	0	2	18:15	13	0	0	0	0	0	13
6:30	2	0	0	0	0	0	2	18:30	6	0	0	0	0	0	6
6:45	2	0	0	0	0	0	2	18:45	17	0	0	0	0	0	17
7:00	2	1	0	1	0	0	4	19:00	13	0	0	0	0	0	13
7:15	3	0	0	0	0	0	3	19:15	12	0	0	0	0	0	12
7:30	1	0	0	0	0	0	1	19:30	18	0	0	0	0	0	18
7:45	7	0	0	0	0	0	7	19:45	11	0	0	0	0	0	11
8:00	7	1	0	0	0	0	8	20:00	12	0	0	0	0	0	12
8:15	8	1	0	0	0	0	9	20:15	11	0	0	0	0	0	11
8:30	8	1	0	0	0	0	9	20:30	6	1	0	0	0	0	7
8:45	6	1	0	0	0	0	7	20:45	6	0	0	0	0	0	6
9:00	10	0	1	0	0	0	11	21:00	3	0	0	0	0	0	3
9:15	12	0	0	1	0	0	13	21:15	2	0	0	0	0	0	2
9:30	14	1	0	0	0	0	15	21:30	3	0	0	1	0	0	4
9:45	9	1	0	0	0	0	10	21:45	0	0	0	0	0	0	0
10:00	13	0	0	0	0	0	13	22:00	2	0	0	0	0	0	2
10:15	14	1	0	0	0	0	15	22:15	0	0	0	0	0	0	0
10:30	17	0	0	0	0	0	17	22:30	1	0	0	1	0	0	2
10:45	16	0	0	0	0	0	16	22:45	0	0	0	0	0	0	0
11:00	29	0	1	0	0	0	30	23:00	3	0	0	0	0	0	3
11:15	22	0	1	0	0	0	23	23:15	1	0	0	0	0	0	1
11:30	20	1	0	0	0	0	21	23:30	0	0	0	0	0	0	0
11:45	19	1	0	0	0	0	20	23:45	1	0	0	0	0	0	1
TOTAL	250	13	3	7	0	0	273	TOTAL	685	17	0	3	0	0	705

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	94

PM PEAK HOUR	4:45 PM
PM PEAK VOLUME	113

TOTAL: AM+PM	935	30	3	10	0	0	978
% OF TOTAL	95.6%	3.1%	0.3%	1.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY5 Middle dwy south of Bear Valley Rd (east of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	10	0	0	0	0	0	10
0:15	0	0	0	0	0	0	0	12:15	7	1	0	0	0	0	8
0:30	0	0	0	0	0	0	0	12:30	8	0	0	0	0	0	8
0:45	0	0	0	0	0	0	0	12:45	7	0	0	0	0	0	7
1:00	0	0	0	0	0	0	0	13:00	2	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0	13:15	7	1	0	0	0	0	8
1:30	0	0	0	0	0	0	0	13:30	5	1	0	0	0	0	6
1:45	0	0	0	0	0	0	0	13:45	5	0	0	0	0	0	5
2:00	0	0	0	0	0	0	0	14:00	7	0	0	0	0	0	7
2:15	0	0	0	0	0	0	0	14:15	7	1	0	0	1	0	9
2:30	0	0	0	0	0	0	0	14:30	12	0	0	0	0	0	12
2:45	1	0	0	0	0	0	1	14:45	9	0	0	0	0	0	9
3:00	0	0	0	0	0	0	0	15:00	8	1	0	0	0	0	9
3:15	0	0	0	0	0	0	0	15:15	10	0	0	0	0	0	10
3:30	0	0	0	0	0	0	0	15:30	11	0	0	0	0	0	11
3:45	0	0	0	0	0	0	0	15:45	8	0	0	0	0	0	8
4:00	0	0	0	0	0	0	0	16:00	8	0	0	0	0	0	8
4:15	1	0	0	0	0	0	1	16:15	5	0	0	0	0	0	5
4:30	1	0	0	0	0	0	1	16:30	9	0	0	0	0	0	9
4:45	0	0	0	0	0	0	0	16:45	21	0	0	0	0	0	21
5:00	0	0	0	0	0	0	0	17:00	12	0	0	0	0	0	12
5:15	0	0	0	0	0	0	0	17:15	9	0	0	0	0	0	9
5:30	1	0	0	0	0	0	1	17:30	2	0	0	0	0	0	2
5:45	1	0	0	0	0	0	1	17:45	7	0	0	0	0	0	7
6:00	0	0	0	0	0	0	0	18:00	6	0	0	0	0	0	6
6:15	0	0	0	0	0	0	0	18:15	6	1	0	0	0	0	7
6:30	1	0	0	0	0	0	1	18:30	4	0	0	0	0	0	4
6:45	0	0	0	0	0	0	0	18:45	5	0	0	0	0	0	5
7:00	0	0	0	0	0	0	0	19:00	10	0	0	0	0	0	10
7:15	2	0	0	0	0	0	2	19:15	8	0	0	0	0	0	8
7:30	0	0	0	0	0	0	0	19:30	5	0	0	0	0	0	5
7:45	1	0	0	0	0	0	1	19:45	8	0	0	0	0	0	8
8:00	0	0	0	0	0	0	0	20:00	6	0	0	0	0	0	6
8:15	1	0	0	0	0	0	1	20:15	2	0	0	0	0	0	2
8:30	3	0	0	0	0	0	3	20:30	5	0	0	0	0	0	5
8:45	0	0	0	0	0	0	0	20:45	3	0	0	0	0	0	3
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	1	0	0	0	0	0	1	21:15	6	0	0	0	0	0	6
9:30	4	0	0	0	0	0	4	21:30	5	0	0	0	0	0	5
9:45	6	0	0	0	0	0	6	21:45	1	0	0	0	0	0	1
10:00	5	0	0	0	0	0	5	22:00	4	0	0	0	0	0	4
10:15	6	0	0	0	0	0	6	22:15	1	0	0	0	0	0	1
10:30	6	0	0	0	0	0	6	22:30	1	0	0	0	0	0	1
10:45	7	0	0	0	0	0	7	22:45	1	0	0	0	0	0	1
11:00	10	0	0	0	0	0	10	23:00	0	0	0	0	0	0	0
11:15	5	0	0	0	0	0	5	23:15	0	0	0	0	0	0	0
11:30	10	0	0	0	0	0	10	23:30	0	0	0	0	0	0	0
11:45	10	0	0	0	0	0	10	23:45	0	0	0	0	0	0	0
TOTAL	86	0	0	0	0	0	86	TOTAL	286	6	0	0	1	0	293

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	35

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	51

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	372	6	0	0	1	0	379
% OF TOTAL	98.2%	1.6%	0.0%	0.0%	0.3%	0.0%	100.0%
TOTAL: ALL	1,186	30	3	12	1	1	1,233
% OF TOTAL	96.2%	2.4%	0.2%	1.0%	0.1%	0.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY5 Middle dwy south of Bear Valley Rd (east of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	1	0	0	0	0	0	1
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	1	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	1	0	0	0	0	0	1
3:00	1	0	0	0	0	0	1
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	2	0	0	0	0	0	2
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	1	0	0	0	0	0	1
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	1	0	0	0	0	1
6:30	0	2	0	0	0	0	2
6:45	3	0	0	0	0	0	3
7:00	2	0	0	0	0	0	2
7:15	1	0	0	0	0	0	1
7:30	2	0	0	0	0	0	2
7:45	1	0	0	0	0	0	1
8:00	3	1	0	0	0	0	4
8:15	5	0	0	0	0	0	5
8:30	3	1	0	0	0	0	4
8:45	5	0	0	0	0	0	5
9:00	4	1	0	0	0	0	5
9:15	6	1	0	2	0	0	9
9:30	8	0	0	0	0	0	8
9:45	11	1	0	0	0	0	12
10:00	14	0	0	0	0	0	14
10:15	3	2	0	0	0	0	5
10:30	12	1	0	0	0	0	13
10:45	15	0	1	1	0	0	17
11:00	20	2	0	0	0	0	22
11:15	10	0	0	0	0	0	10
11:30	16	0	0	1	0	1	18
11:45	13	0	0	3	0	0	16
TOTAL	167	13	1	7	0	1	189

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	67

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	17	0	0	0	0	0	17
12:15	19	0	0	0	0	0	19
12:30	21	1	0	0	0	0	22
12:45	22	0	0	0	0	0	22
13:00	14	1	0	0	0	0	15
13:15	18	0	0	0	0	0	18
13:30	15	1	0	0	0	0	16
13:45	13	1	0	0	0	0	14
14:00	11	1	0	0	0	0	12
14:15	15	1	0	0	0	0	16
14:30	17	0	0	0	0	0	17
14:45	16	1	0	0	0	0	17
15:00	22	1	0	1	0	0	24
15:15	21	0	0	0	0	0	21
15:30	17	0	0	1	0	0	18
15:45	18	1	0	0	0	0	19
16:00	17	0	1	0	0	0	18
16:15	17	0	0	0	0	0	17
16:30	15	0	0	0	0	0	15
16:45	21	1	1	0	0	0	23
17:00	16	0	0	0	0	0	16
17:15	18	0	0	0	0	0	18
17:30	20	0	0	0	0	0	20
17:45	12	0	0	0	0	0	12
18:00	15	1	0	0	0	0	16
18:15	19	0	0	0	0	0	19
18:30	22	0	0	0	0	0	22
18:45	11	0	0	0	0	0	11
19:00	19	0	0	0	0	0	19
19:15	17	0	0	0	0	0	17
19:30	10	0	0	0	0	0	10
19:45	15	0	0	0	0	0	15
20:00	12	0	0	0	0	0	12
20:15	12	0	0	0	0	0	12
20:30	13	0	0	0	0	0	13
20:45	10	0	0	0	0	0	10
21:00	7	0	0	0	0	0	7
21:15	5	0	0	0	0	0	5
21:30	6	0	0	0	0	0	6
21:45	4	0	0	0	0	0	4
22:00	13	0	0	0	0	0	13
22:15	5	0	0	1	0	0	6
22:30	5	0	0	1	0	0	6
22:45	1	0	0	0	0	0	1
23:00	4	0	0	0	0	0	4
23:15	7	0	0	0	0	0	7
23:30	2	0	0	1	0	0	3
23:45	1	0	0	0	0	0	1
TOTAL	647	11	2	5	0	0	665

AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	82

TOTAL: AM+PM	814	24	3	12	0	1	854
% OF TOTAL	95.3%	2.8%	0.4%	1.4%	0.0%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY5 Middle dwy south of Bear Valley Rd (east of Mall Blvd)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	27	0	0	0	0	0	27
0:15	1	0	0	0	0	0	1	12:15	26	1	0	0	0	0	27
0:30	1	0	0	0	0	0	1	12:30	29	1	0	0	0	0	30
0:45	0	0	0	0	0	0	0	12:45	29	0	0	0	0	0	29
1:00	1	0	0	0	0	0	1	13:00	16	1	0	0	0	0	17
1:15	0	0	0	0	0	0	0	13:15	25	1	0	0	0	0	26
1:30	0	0	0	0	0	0	0	13:30	20	2	0	0	0	0	22
1:45	1	0	0	0	0	0	1	13:45	18	1	0	0	0	0	19
2:00	0	0	0	0	0	0	0	14:00	18	1	0	0	0	0	19
2:15	0	0	0	0	0	0	0	14:15	22	2	0	0	1	0	25
2:30	0	0	0	0	0	0	0	14:30	29	0	0	0	0	0	29
2:45	2	0	0	0	0	0	2	14:45	25	1	0	0	0	0	26
3:00	1	0	0	0	0	0	1	15:00	30	2	0	1	0	0	33
3:15	0	0	0	0	0	0	0	15:15	31	0	0	0	0	0	31
3:30	0	0	0	0	0	0	0	15:30	28	0	0	1	0	0	29
3:45	0	0	0	0	0	0	0	15:45	26	1	0	0	0	0	27
4:00	0	0	0	0	0	0	0	16:00	25	0	1	0	0	0	26
4:15	3	0	0	0	0	0	3	16:15	22	0	0	0	0	0	22
4:30	1	0	0	0	0	0	1	16:30	24	0	0	0	0	0	24
4:45	0	0	0	0	0	0	0	16:45	42	1	1	0	0	0	44
5:00	0	0	0	0	0	0	0	17:00	28	0	0	0	0	0	28
5:15	1	0	0	0	0	0	1	17:15	27	0	0	0	0	0	27
5:30	1	0	0	0	0	0	1	17:30	22	0	0	0	0	0	22
5:45	1	0	0	0	0	0	1	17:45	19	0	0	0	0	0	19
6:00	1	0	0	0	0	0	1	18:00	21	1	0	0	0	0	22
6:15	0	1	0	0	0	0	1	18:15	25	1	0	0	0	0	26
6:30	1	2	0	0	0	0	3	18:30	26	0	0	0	0	0	26
6:45	3	0	0	0	0	0	3	18:45	16	0	0	0	0	0	16
7:00	2	0	0	0	0	0	2	19:00	29	0	0	0	0	0	29
7:15	3	0	0	0	0	0	3	19:15	25	0	0	0	0	0	25
7:30	2	0	0	0	0	0	2	19:30	15	0	0	0	0	0	15
7:45	2	0	0	0	0	0	2	19:45	23	0	0	0	0	0	23
8:00	3	1	0	0	0	0	4	20:00	18	0	0	0	0	0	18
8:15	6	0	0	0	0	0	6	20:15	14	0	0	0	0	0	14
8:30	6	1	0	0	0	0	7	20:30	18	0	0	0	0	0	18
8:45	5	0	0	0	0	0	5	20:45	13	0	0	0	0	0	13
9:00	7	1	0	0	0	0	8	21:00	10	0	0	0	0	0	10
9:15	7	1	0	2	0	0	10	21:15	11	0	0	0	0	0	11
9:30	12	0	0	0	0	0	12	21:30	11	0	0	0	0	0	11
9:45	17	1	0	0	0	0	18	21:45	5	0	0	0	0	0	5
10:00	19	0	0	0	0	0	19	22:00	17	0	0	0	0	0	17
10:15	9	2	0	0	0	0	11	22:15	6	0	0	1	0	0	7
10:30	18	1	0	0	0	0	19	22:30	6	0	0	1	0	0	7
10:45	22	0	1	1	0	0	24	22:45	2	0	0	0	0	0	2
11:00	30	2	0	0	0	0	32	23:00	4	0	0	0	0	0	4
11:15	15	0	0	0	0	0	15	23:15	7	0	0	0	0	0	7
11:30	26	0	0	1	0	1	28	23:30	2	0	0	1	0	0	3
11:45	23	0	0	3	0	0	26	23:45	1	0	0	0	0	0	1
TOTAL	253	13	1	7	0	1	275	TOTAL	933	17	2	5	1	0	958

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	101

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	123

TOTAL: AM+PM	1,186	30	3	12	1	1	1,233
% OF TOTAL	96.2%	2.4%	0.2%	1.0%	0.1%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY6 Estern dwy south of Bear Valley Rd (east of Mall Blvd)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	7	0	1	0	0	0	8
0:15	2	0	0	0	0	0	2	12:15	4	0	0	0	0	0	4
0:30	1	0	0	0	0	0	1	12:30	3	0	0	0	0	0	3
0:45	0	0	0	0	0	0	0	12:45	7	0	0	0	0	0	7
1:00	2	0	0	0	0	0	2	13:00	9	0	0	0	0	0	9
1:15	4	0	0	0	0	0	4	13:15	11	1	0	0	0	0	12
1:30	1	0	0	0	0	0	1	13:30	5	0	0	0	0	0	5
1:45	1	0	0	0	0	0	1	13:45	6	1	1	0	0	0	8
2:00	2	0	0	0	0	0	2	14:00	5	1	0	0	0	0	6
2:15	1	0	0	0	0	0	1	14:15	3	1	0	0	0	0	4
2:30	5	0	0	0	0	0	5	14:30	8	1	0	0	0	0	9
2:45	1	0	0	0	0	0	1	14:45	4	0	0	0	0	0	4
3:00	2	0	0	0	0	0	2	15:00	4	0	0	0	0	0	4
3:15	5	0	0	0	0	0	5	15:15	6	0	0	0	0	0	6
3:30	4	0	0	0	0	0	4	15:30	7	1	0	0	0	0	8
3:45	3	0	0	0	0	0	3	15:45	6	0	0	0	0	0	6
4:00	5	0	0	0	0	0	5	16:00	10	0	0	0	0	0	10
4:15	4	0	0	0	0	0	4	16:15	6	0	0	0	0	0	6
4:30	8	3	0	0	0	0	11	16:30	9	0	0	0	0	0	9
4:45	7	0	0	0	0	0	7	16:45	9	0	0	0	0	0	9
5:00	4	2	0	0	0	0	6	17:00	8	0	0	0	0	0	8
5:15	4	2	0	0	0	0	6	17:15	8	0	0	0	0	0	8
5:30	3	0	0	0	0	0	3	17:30	9	0	0	0	0	0	9
5:45	1	0	0	0	0	0	1	17:45	5	0	0	0	0	0	5
6:00	2	0	0	0	0	0	2	18:00	4	0	0	0	0	0	4
6:15	6	1	0	0	0	0	7	18:15	7	0	0	0	0	0	7
6:30	4	0	0	0	0	0	4	18:30	4	0	0	0	0	0	4
6:45	4	1	0	0	0	0	5	18:45	6	0	0	0	0	0	6
7:00	7	0	0	0	0	0	7	19:00	4	1	0	0	0	0	5
7:15	5	0	0	1	0	0	6	19:15	6	0	0	0	0	0	6
7:30	5	0	0	0	0	0	5	19:30	10	0	0	0	0	0	10
7:45	3	0	0	0	0	0	3	19:45	6	0	0	0	0	0	6
8:00	4	2	0	0	0	0	6	20:00	4	0	0	0	0	0	4
8:15	7	0	0	0	0	0	7	20:15	2	0	0	0	0	0	2
8:30	7	0	0	0	0	0	7	20:30	1	0	0	1	0	0	2
8:45	5	0	0	0	0	0	5	20:45	5	0	0	0	0	0	5
9:00	7	0	1	0	0	0	8	21:00	8	0	1	0	0	0	9
9:15	8	0	0	0	0	0	8	21:15	5	0	0	0	0	0	5
9:30	6	1	0	0	0	0	7	21:30	0	0	0	0	0	0	0
9:45	4	0	0	0	0	0	4	21:45	1	0	0	0	0	0	1
10:00	5	0	0	0	0	0	5	22:00	3	0	0	0	0	0	3
10:15	2	0	0	0	0	0	2	22:15	1	0	0	0	0	0	1
10:30	5	0	0	0	0	0	5	22:30	0	0	0	0	0	0	0
10:45	4	0	0	0	0	0	4	22:45	2	0	0	0	0	0	2
11:00	7	0	0	0	0	0	7	23:00	0	0	0	0	0	0	0
11:15	6	0	0	0	0	0	6	23:15	0	0	0	0	0	0	0
11:30	3	0	0	0	0	0	3	23:30	3	1	0	0	0	0	4
11:45	5	1	0	0	0	0	6	23:45	2	0	0	0	0	0	2
TOTAL	192	13	1	1	0	0	207	TOTAL	243	8	3	1	0	0	255

AM PEAK HOUR	4:30 AM
AM PEAK VOLUME	30

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	34

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	435	21	4	2	0	0	462
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.2%	4.5%	0.9%	0.4%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	822	37	6	4	1	0	870
CLASS 6	Buses	% OF TOTAL	94.5%	4.3%	0.7%	0.5%	0.1%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY6 Estern dwy south of Bear Valley Rd (east of Mall Blvd)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	2	0	0	0	0	0	2
0:15	4	0	0	0	0	0	4
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	1	0	0	0	0	0	1
1:30	2	0	0	0	0	0	2
1:45	1	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0
2:15	1	0	0	0	0	0	1
2:30	0	0	0	0	0	0	0
2:45	3	0	0	0	0	0	3
3:00	3	0	0	0	0	0	3
3:15	1	0	0	0	0	0	1
3:30	5	0	0	0	0	0	5
3:45	1	1	0	0	0	0	2
4:00	2	0	0	0	0	0	2
4:15	4	0	0	0	0	0	4
4:30	2	0	0	0	0	0	2
4:45	8	0	0	0	0	0	8
5:00	3	1	0	0	0	0	4
5:15	3	0	0	0	0	0	3
5:30	7	1	0	0	0	0	8
5:45	1	0	0	0	0	0	1
6:00	1	0	0	0	0	0	1
6:15	2	0	0	0	0	0	2
6:30	2	2	0	0	0	0	4
6:45	4	1	0	0	0	0	5
7:00	5	0	0	0	0	0	5
7:15	5	0	0	1	0	0	6
7:30	7	0	0	0	0	0	7
7:45	1	2	0	0	0	0	3
8:00	1	0	0	0	0	0	1
8:15	4	0	0	0	0	0	4
8:30	7	0	0	0	0	0	7
8:45	3	0	0	0	0	0	3
9:00	6	1	1	0	0	0	8
9:15	5	0	0	0	0	0	5
9:30	7	0	0	0	0	0	7
9:45	6	0	0	0	0	0	6
10:00	6	0	0	0	0	0	6
10:15	4	0	0	0	0	0	4
10:30	3	0	0	0	0	0	3
10:45	5	0	1	0	0	0	6
11:00	4	0	0	0	0	0	4
11:15	4	0	0	0	0	0	4
11:30	6	0	0	0	0	0	6
11:45	3	1	0	0	0	0	4
TOTAL	157	10	2	1	0	0	170

AM PEAK HOUR	9:00 AM
AM PEAK VOLUME	26

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	3	0	0	0	0	0	3
12:15	6	0	0	0	0	0	6
12:30	1	0	0	1	0	0	2
12:45	5	0	0	0	0	0	5
13:00	7	0	0	0	0	0	7
13:15	14	0	0	0	0	0	14
13:30	4	0	0	0	1	0	5
13:45	4	0	0	0	0	0	4
14:00	5	0	0	0	0	0	5
14:15	5	0	0	0	0	0	5
14:30	7	0	0	0	0	0	7
14:45	4	0	0	0	0	0	4
15:00	10	0	0	0	0	0	10
15:15	5	0	0	0	0	0	5
15:30	5	0	0	0	0	0	5
15:45	4	0	0	0	0	0	4
16:00	5	0	0	0	0	0	5
16:15	6	1	0	0	0	0	7
16:30	5	0	0	0	0	0	5
16:45	9	1	0	0	0	0	10
17:00	9	0	0	0	0	0	9
17:15	4	0	0	0	0	0	4
17:30	8	0	0	0	0	0	8
17:45	11	0	0	0	0	0	11
18:00	8	1	0	0	0	0	9
18:15	3	0	0	0	0	0	3
18:30	4	0	0	0	0	0	4
18:45	4	0	0	0	0	0	4
19:00	4	1	0	0	0	0	5
19:15	2	0	0	0	0	0	2
19:30	6	0	0	0	0	0	6
19:45	6	0	0	0	0	0	6
20:00	4	1	0	0	0	0	5
20:15	2	0	0	0	0	0	2
20:30	5	0	0	0	0	0	5
20:45	6	0	0	0	0	0	6
21:00	6	0	0	0	0	0	6
21:15	5	0	0	0	0	0	5
21:30	4	0	0	0	0	0	4
21:45	2	0	0	0	0	0	2
22:00	1	0	0	0	0	0	1
22:15	3	0	0	0	0	0	3
22:30	2	0	0	0	0	0	2
22:45	1	0	0	0	0	0	1
23:00	1	0	0	0	0	0	1
23:15	0	0	0	0	0	0	0
23:30	2	1	0	0	0	0	3
23:45	3	0	0	0	0	0	3
TOTAL	230	6	0	1	1	0	238

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	32

TOTAL: AM+PM		387	16	2	2	1	0	408
% OF TOTAL		94.9%	3.9%	0.5%	0.5%	0.2%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY6 Estern dwy south of Bear Valley Rd (east of Mall Blvd)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	3	0	0	0	0	0	3	12:00	10	0	1	0	0	0	11
0:15	6	0	0	0	0	0	6	12:15	10	0	0	0	0	0	10
0:30	2	0	0	0	0	0	2	12:30	4	0	0	1	0	0	5
0:45	0	0	0	0	0	0	0	12:45	12	0	0	0	0	0	12
1:00	3	0	0	0	0	0	3	13:00	16	0	0	0	0	0	16
1:15	5	0	0	0	0	0	5	13:15	25	1	0	0	0	0	26
1:30	3	0	0	0	0	0	3	13:30	9	0	0	0	1	0	10
1:45	2	0	0	0	0	0	2	13:45	10	1	1	0	0	0	12
2:00	2	0	0	0	0	0	2	14:00	10	1	0	0	0	0	11
2:15	2	0	0	0	0	0	2	14:15	8	1	0	0	0	0	9
2:30	5	0	0	0	0	0	5	14:30	15	1	0	0	0	0	16
2:45	4	0	0	0	0	0	4	14:45	8	0	0	0	0	0	8
3:00	5	0	0	0	0	0	5	15:00	14	0	0	0	0	0	14
3:15	6	0	0	0	0	0	6	15:15	11	0	0	0	0	0	11
3:30	9	0	0	0	0	0	9	15:30	12	1	0	0	0	0	13
3:45	4	1	0	0	0	0	5	15:45	10	0	0	0	0	0	10
4:00	7	0	0	0	0	0	7	16:00	15	0	0	0	0	0	15
4:15	8	0	0	0	0	0	8	16:15	12	1	0	0	0	0	13
4:30	10	3	0	0	0	0	13	16:30	14	0	0	0	0	0	14
4:45	15	0	0	0	0	0	15	16:45	18	1	0	0	0	0	19
5:00	7	3	0	0	0	0	10	17:00	17	0	0	0	0	0	17
5:15	7	2	0	0	0	0	9	17:15	12	0	0	0	0	0	12
5:30	10	1	0	0	0	0	11	17:30	17	0	0	0	0	0	17
5:45	2	0	0	0	0	0	2	17:45	16	0	0	0	0	0	16
6:00	3	0	0	0	0	0	3	18:00	12	1	0	0	0	0	13
6:15	8	1	0	0	0	0	9	18:15	10	0	0	0	0	0	10
6:30	6	2	0	0	0	0	8	18:30	8	0	0	0	0	0	8
6:45	8	2	0	0	0	0	10	18:45	10	0	0	0	0	0	10
7:00	12	0	0	0	0	0	12	19:00	8	2	0	0	0	0	10
7:15	10	0	0	2	0	0	12	19:15	8	0	0	0	0	0	8
7:30	12	0	0	0	0	0	12	19:30	16	0	0	0	0	0	16
7:45	4	2	0	0	0	0	6	19:45	12	0	0	0	0	0	12
8:00	5	2	0	0	0	0	7	20:00	8	1	0	0	0	0	9
8:15	11	0	0	0	0	0	11	20:15	4	0	0	0	0	0	4
8:30	14	0	0	0	0	0	14	20:30	6	0	0	1	0	0	7
8:45	8	0	0	0	0	0	8	20:45	11	0	0	0	0	0	11
9:00	13	1	2	0	0	0	16	21:00	14	0	1	0	0	0	15
9:15	13	0	0	0	0	0	13	21:15	10	0	0	0	0	0	10
9:30	13	1	0	0	0	0	14	21:30	4	0	0	0	0	0	4
9:45	10	0	0	0	0	0	10	21:45	3	0	0	0	0	0	3
10:00	11	0	0	0	0	0	11	22:00	4	0	0	0	0	0	4
10:15	6	0	0	0	0	0	6	22:15	4	0	0	0	0	0	4
10:30	8	0	0	0	0	0	8	22:30	2	0	0	0	0	0	2
10:45	9	0	1	0	0	0	10	22:45	3	0	0	0	0	0	3
11:00	11	0	0	0	0	0	11	23:00	1	0	0	0	0	0	1
11:15	10	0	0	0	0	0	10	23:15	0	0	0	0	0	0	0
11:30	9	0	0	0	0	0	9	23:30	5	2	0	0	0	0	7
11:45	8	2	0	0	0	0	10	23:45	5	0	0	0	0	0	5
TOTAL	349	23	3	2	0	0	377	TOTAL	473	14	3	2	1	0	493

AM PEAK HOUR	9:00 AM	AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	53	AM PEAK VOLUME	65

TOTAL: AM+PM	822	37	6	4	1	0	870
% OF TOTAL	94.5%	4.3%	0.7%	0.5%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY7 Dwy west of Amargosa Rd (Valero)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	6	0	0	0	0	0	6
0:15	2	0	0	0	0	0	2	12:15	8	0	0	0	0	0	8
0:30	2	1	0	0	0	0	3	12:30	3	0	0	0	0	0	3
0:45	3	0	0	0	0	0	3	12:45	4	0	0	0	0	0	4
1:00	0	0	0	0	0	0	0	13:00	5	0	0	0	0	0	5
1:15	1	0	0	0	0	0	1	13:15	6	0	0	0	0	0	6
1:30	2	0	0	0	0	0	2	13:30	4	0	0	0	0	0	4
1:45	1	1	0	0	0	0	2	13:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1	14:00	4	0	0	0	0	0	4
2:15	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7
2:30	1	0	0	0	0	0	1	14:30	2	0	0	0	0	0	2
2:45	1	0	0	0	0	0	1	14:45	2	0	0	0	0	0	2
3:00	1	0	0	0	0	0	1	15:00	10	1	0	0	0	0	11
3:15	1	0	0	0	0	0	1	15:15	6	0	0	0	0	0	6
3:30	3	0	0	0	0	0	3	15:30	5	0	0	0	0	0	5
3:45	1	0	0	0	0	0	1	15:45	4	1	0	0	0	0	5
4:00	3	0	0	0	0	0	3	16:00	4	1	0	0	0	0	5
4:15	3	1	0	0	0	0	4	16:15	1	0	0	0	0	0	1
4:30	2	0	0	0	0	0	2	16:30	1	0	0	0	0	0	1
4:45	5	0	0	0	0	0	5	16:45	7	0	0	0	0	0	7
5:00	0	0	0	0	0	0	0	17:00	6	0	0	0	0	0	6
5:15	2	0	0	0	0	0	2	17:15	5	0	0	0	0	0	5
5:30	0	0	0	0	0	0	0	17:30	7	0	0	0	0	0	7
5:45	2	0	0	0	0	0	2	17:45	4	0	0	0	0	0	4
6:00	1	0	0	0	0	0	1	18:00	5	1	0	0	0	0	6
6:15	0	1	0	0	0	0	1	18:15	4	0	0	0	0	0	4
6:30	1	0	0	0	0	0	1	18:30	9	0	0	0	0	0	9
6:45	3	0	0	0	0	0	3	18:45	3	0	0	0	0	0	3
7:00	4	1	0	0	0	0	5	19:00	6	0	0	0	0	0	6
7:15	6	0	0	0	0	0	6	19:15	4	0	0	0	0	0	4
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	2	0	0	0	0	0	2	19:45	1	0	0	0	0	0	1
8:00	2	0	0	0	0	0	2	20:00	7	1	0	0	0	0	8
8:15	3	0	0	0	0	0	3	20:15	4	0	0	0	0	0	4
8:30	2	0	0	0	0	0	2	20:30	5	0	0	0	0	0	5
8:45	3	0	0	0	0	0	3	20:45	3	0	0	0	0	0	3
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	7	0	0	0	0	0	7	21:15	6	0	0	0	0	0	6
9:30	4	0	0	0	0	0	4	21:30	6	0	0	0	0	0	6
9:45	4	0	0	0	0	0	4	21:45	6	0	0	0	0	0	6
10:00	4	0	0	0	0	0	4	22:00	5	0	0	0	0	0	5
10:15	6	0	0	0	0	0	6	22:15	3	0	0	0	0	0	3
10:30	6	1	0	0	0	0	7	22:30	3	0	0	0	0	0	3
10:45	5	0	0	0	0	0	5	22:45	0	0	0	0	0	0	0
11:00	5	0	0	0	0	0	5	23:00	0	0	0	0	0	0	0
11:15	6	0	1	0	0	0	7	23:15	2	0	0	0	0	0	2
11:30	5	0	0	0	0	0	5	23:30	2	0	0	0	0	0	2
11:45	7	0	0	0	0	0	7	23:45	0	1	0	0	0	0	1
TOTAL	126	6	1	0	0	0	133	TOTAL	201	6	0	0	0	0	207

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	24	AM PEAK VOLUME	27

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	327	12	1	0	0	0	340
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.2%	3.5%	0.3%	0.0%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	331	12	1	0	0	0	344
CLASS 6	Buses	% OF TOTAL	96.2%	3.5%	0.3%	0.0%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY7 Dwy west of Amargosa Rd (Valero)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

AM PEAK HOUR	11:45 AM
AM PEAK VOLUME	0

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0
16:30	1	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0
19:00	0	0	0	0	0	0	0
19:15	0	0	0	0	0	0	0
19:30	0	0	0	0	0	0	0
19:45	0	0	0	0	0	0	0
20:00	0	0	0	0	0	0	0
20:15	0	0	0	0	0	0	0
20:30	0	0	0	0	0	0	0
20:45	0	0	0	0	0	0	0
21:00	0	0	0	0	0	0	0
21:15	0	0	0	0	0	0	0
21:30	0	0	0	0	0	0	0
21:45	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0
22:15	1	0	0	0	0	0	1
22:30	0	0	0	0	0	0	0
22:45	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0
23:15	1	0	0	0	0	0	1
23:30	0	0	0	0	0	0	0
23:45	1	0	0	0	0	0	1
TOTAL	4	0	0	0	0	0	4

AM PEAK HOUR	11:15 PM
AM PEAK VOLUME	2

TOTAL: AM+PM	4	0	0	0	0	0	4
% OF TOTAL	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY7 Dwy west of Amargosa Rd (Valero)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	6	0	0	0	0	0	6
0:15	2	0	0	0	0	0	2	12:15	8	0	0	0	0	0	8
0:30	2	1	0	0	0	0	3	12:30	3	0	0	0	0	0	3
0:45	3	0	0	0	0	0	3	12:45	4	0	0	0	0	0	4
1:00	0	0	0	0	0	0	0	13:00	5	0	0	0	0	0	5
1:15	1	0	0	0	0	0	1	13:15	6	0	0	0	0	0	6
1:30	2	0	0	0	0	0	2	13:30	4	0	0	0	0	0	4
1:45	1	1	0	0	0	0	2	13:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1	14:00	4	0	0	0	0	0	4
2:15	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7
2:30	1	0	0	0	0	0	1	14:30	2	0	0	0	0	0	2
2:45	1	0	0	0	0	0	1	14:45	2	0	0	0	0	0	2
3:00	1	0	0	0	0	0	1	15:00	10	1	0	0	0	0	11
3:15	1	0	0	0	0	0	1	15:15	6	0	0	0	0	0	6
3:30	3	0	0	0	0	0	3	15:30	5	0	0	0	0	0	5
3:45	1	0	0	0	0	0	1	15:45	4	1	0	0	0	0	5
4:00	3	0	0	0	0	0	3	16:00	4	1	0	0	0	0	5
4:15	3	1	0	0	0	0	4	16:15	1	0	0	0	0	0	1
4:30	2	0	0	0	0	0	2	16:30	2	0	0	0	0	0	2
4:45	5	0	0	0	0	0	5	16:45	7	0	0	0	0	0	7
5:00	0	0	0	0	0	0	0	17:00	6	0	0	0	0	0	6
5:15	2	0	0	0	0	0	2	17:15	5	0	0	0	0	0	5
5:30	0	0	0	0	0	0	0	17:30	7	0	0	0	0	0	7
5:45	2	0	0	0	0	0	2	17:45	4	0	0	0	0	0	4
6:00	1	0	0	0	0	0	1	18:00	5	1	0	0	0	0	6
6:15	0	1	0	0	0	0	1	18:15	4	0	0	0	0	0	4
6:30	1	0	0	0	0	0	1	18:30	9	0	0	0	0	0	9
6:45	3	0	0	0	0	0	3	18:45	3	0	0	0	0	0	3
7:00	4	1	0	0	0	0	5	19:00	6	0	0	0	0	0	6
7:15	6	0	0	0	0	0	6	19:15	4	0	0	0	0	0	4
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	2	0	0	0	0	0	2	19:45	1	0	0	0	0	0	1
8:00	2	0	0	0	0	0	2	20:00	7	1	0	0	0	0	8
8:15	3	0	0	0	0	0	3	20:15	4	0	0	0	0	0	4
8:30	2	0	0	0	0	0	2	20:30	5	0	0	0	0	0	5
8:45	3	0	0	0	0	0	3	20:45	3	0	0	0	0	0	3
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	7	0	0	0	0	0	7	21:15	6	0	0	0	0	0	6
9:30	4	0	0	0	0	0	4	21:30	6	0	0	0	0	0	6
9:45	4	0	0	0	0	0	4	21:45	6	0	0	0	0	0	6
10:00	4	0	0	0	0	0	4	22:00	5	0	0	0	0	0	5
10:15	6	0	0	0	0	0	6	22:15	4	0	0	0	0	0	4
10:30	6	1	0	0	0	0	7	22:30	3	0	0	0	0	0	3
10:45	5	0	0	0	0	0	5	22:45	0	0	0	0	0	0	0
11:00	5	0	0	0	0	0	5	23:00	0	0	0	0	0	0	0
11:15	6	0	1	0	0	0	7	23:15	3	0	0	0	0	0	3
11:30	5	0	0	0	0	0	5	23:30	2	0	0	0	0	0	2
11:45	7	0	0	0	0	0	7	23:45	1	1	0	0	0	0	2
TOTAL	126	6	1	0	0	0	133	TOTAL	205	6	0	0	0	0	211

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	24

AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	27

TOTAL: AM+PM	331	12	1	0	0	0	344
% OF TOTAL	96.2%	3.5%	0.3%	0.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY8 Dwy west of Amargosa Rd (Applebee's Grill-Bar)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	2	0	0	0	0	0	2	12:00	14	0	0	1	0	0	15
0:15	0	0	0	0	0	0	0	12:15	12	0	0	0	0	0	12
0:30	1	0	0	0	0	0	1	12:30	12	0	0	0	0	0	12
0:45	0	0	0	0	0	0	0	12:45	11	0	0	1	0	0	12
1:00	0	0	0	0	0	0	0	13:00	5	0	0	0	0	0	5
1:15	1	0	0	0	0	0	1	13:15	11	1	0	0	1	1	14
1:30	0	0	0	0	0	0	0	13:30	4	1	0	1	0	0	6
1:45	0	0	0	0	0	0	0	13:45	8	1	0	0	0	0	9
2:00	0	0	0	0	0	0	0	14:00	4	1	0	0	0	0	5
2:15	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7
2:30	0	0	0	0	0	0	0	14:30	15	0	0	0	0	0	15
2:45	0	0	0	0	0	0	0	14:45	7	0	0	0	0	0	7
3:00	3	0	0	0	0	0	3	15:00	16	0	0	0	0	0	16
3:15	0	0	0	0	0	0	0	15:15	11	0	0	0	0	0	11
3:30	1	2	0	0	0	0	3	15:30	15	0	0	0	0	0	15
3:45	1	0	0	0	0	0	1	15:45	10	0	0	0	0	0	10
4:00	0	0	0	0	0	0	0	16:00	15	0	0	0	0	0	15
4:15	1	0	0	0	0	0	1	16:15	12	0	0	0	0	0	12
4:30	1	0	0	0	0	0	1	16:30	9	1	0	0	0	0	10
4:45	4	0	0	0	0	0	4	16:45	6	0	0	0	0	0	6
5:00	2	0	0	0	0	0	2	17:00	7	0	0	0	0	0	7
5:15	2	0	0	0	0	0	2	17:15	17	1	0	0	0	0	18
5:30	1	1	0	0	0	0	2	17:30	12	0	0	0	0	0	12
5:45	4	0	0	0	0	0	4	17:45	9	1	0	0	0	0	10
6:00	2	0	0	0	0	0	2	18:00	12	0	0	0	0	0	12
6:15	2	0	0	0	0	0	2	18:15	15	0	0	0	0	0	15
6:30	2	1	0	0	0	0	3	18:30	9	0	0	0	0	0	9
6:45	3	0	0	0	0	0	3	18:45	17	0	0	0	0	0	17
7:00	4	0	0	0	0	0	4	19:00	16	0	0	0	0	0	16
7:15	5	0	0	0	0	0	5	19:15	10	0	0	0	0	0	10
7:30	6	1	1	0	0	0	8	19:30	12	0	0	0	0	0	12
7:45	3	2	0	0	0	0	5	19:45	7	0	0	0	0	0	7
8:00	3	0	0	1	0	0	4	20:00	7	0	0	0	0	0	7
8:15	3	0	0	0	0	0	3	20:15	11	0	0	0	0	0	11
8:30	7	0	0	1	0	0	8	20:30	4	0	0	0	0	0	4
8:45	7	2	1	0	0	0	10	20:45	6	0	0	0	0	0	6
9:00	6	0	0	0	0	0	6	21:00	8	0	0	0	0	0	8
9:15	7	1	0	0	0	0	8	21:15	18	0	0	0	0	0	18
9:30	9	0	0	0	0	0	9	21:30	14	0	0	0	0	0	14
9:45	8	0	0	0	0	0	8	21:45	4	1	0	0	0	0	5
10:00	9	0	0	0	0	0	9	22:00	9	0	0	0	0	0	9
10:15	5	0	0	0	0	0	5	22:15	3	0	0	0	0	0	3
10:30	4	0	0	0	0	0	4	22:30	9	0	0	0	0	0	9
10:45	5	1	0	1	0	0	7	22:45	5	0	0	0	0	0	5
11:00	7	0	0	0	0	0	7	23:00	1	0	0	1	0	0	2
11:15	10	0	0	0	0	0	10	23:15	4	0	0	0	0	0	4
11:30	6	1	0	0	0	0	7	23:30	1	1	0	0	0	0	2
11:45	15	0	0	1	0	0	16	23:45	1	0	0	0	0	0	1
TOTAL	162	12	2	4	0	0	180	**TOTAL**	452	9	0	4	1	1	467

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	40

AM PEAK HOUR	6:15 PM
AM PEAK VOLUME	57

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	614	21	2	8	1	1	647
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	94.9%	3.2%	0.3%	1.2%	0.2%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	1,103	46	7	10	1	1	1,168
CLASS 6	Buses	**% OF TOTAL**	94.4%	3.9%	0.6%	0.9%	0.1%	0.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY8 Dwy west of Amargosa Rd (Applebee's Grill-Bar)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	6	0	0	0	0	0	6
0:15	5	0	0	0	0	0	5
0:30	2	1	0	0	0	0	3
0:45	5	0	0	0	0	0	5
1:00	2	0	0	0	0	0	2
1:15	1	0	0	0	0	0	1
1:30	4	0	0	0	0	0	4
1:45	2	0	0	0	0	0	2
2:00	2	0	0	0	0	0	2
2:15	3	0	0	0	0	0	3
2:30	2	0	0	0	0	0	2
2:45	0	0	0	0	0	0	0
3:00	1	0	0	0	0	0	1
3:15	2	0	0	0	0	0	2
3:30	1	0	0	0	0	0	1
3:45	4	0	0	0	0	0	4
4:00	4	0	0	0	0	0	4
4:15	4	2	0	0	0	0	6
4:30	2	4	0	0	0	0	6
4:45	6	0	0	0	0	0	6
5:00	3	0	0	0	0	0	3
5:15	0	2	0	0	0	0	2
5:30	2	0	0	0	0	0	2
5:45	1	1	0	0	0	0	2
6:00	3	1	0	0	0	0	4
6:15	6	0	0	0	0	0	6
6:30	4	0	0	0	0	0	4
6:45	3	0	0	0	0	0	3
7:00	2	1	0	0	0	0	3
7:15	4	1	0	0	0	0	5
7:30	5	0	0	0	0	0	5
7:45	3	0	1	0	0	0	4
8:00	2	3	0	1	0	0	6
8:15	3	0	0	0	0	0	3
8:30	4	0	0	0	0	0	4
8:45	5	0	0	0	0	0	5
9:00	2	1	1	0	0	0	4
9:15	9	0	0	0	0	0	9
9:30	10	1	0	0	0	0	11
9:45	5	0	0	0	0	0	5
10:00	2	0	0	0	0	0	2
10:15	2	0	0	0	0	0	2
10:30	6	0	0	0	0	0	6
10:45	9	1	0	0	0	0	10
11:00	6	0	0	0	0	0	6
11:15	8	0	0	0	0	0	8
11:30	2	0	1	0	0	0	3
11:45	6	0	0	0	0	0	6
TOTAL	175	19	3	1	0	0	198

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	30

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	7	0	0	0	0	0	7
12:15	5	0	0	0	0	0	5
12:30	9	0	0	0	0	0	9
12:45	7	0	0	0	0	0	7
13:00	1	0	0	0	0	0	1
13:15	6	0	0	0	0	0	6
13:30	5	0	0	0	0	0	5
13:45	3	0	0	0	0	0	3
14:00	7	4	1	0	0	0	12
14:15	7	1	0	0	0	0	8
14:30	5	0	0	0	0	0	5
14:45	4	0	0	0	0	0	4
15:00	7	1	0	0	0	0	8
15:15	6	0	0	0	0	0	6
15:30	10	0	0	0	0	0	10
15:45	6	0	0	0	0	0	6
16:00	7	0	0	0	0	0	7
16:15	7	0	0	0	0	0	7
16:30	6	0	0	0	0	0	6
16:45	5	0	0	0	0	0	5
17:00	4	0	0	0	0	0	4
17:15	7	0	0	0	0	0	7
17:30	11	0	0	0	0	0	11
17:45	9	0	0	0	0	0	9
18:00	9	0	0	0	0	0	9
18:15	9	0	0	0	0	0	9
18:30	11	0	0	0	0	0	11
18:45	8	0	0	0	0	0	8
19:00	7	0	0	0	0	0	7
19:15	8	0	1	0	0	0	9
19:30	10	0	0	0	0	0	10
19:45	5	0	0	0	0	0	5
20:00	11	0	0	0	0	0	11
20:15	9	0	0	0	0	0	9
20:30	3	0	0	1	0	0	4
20:45	4	0	0	0	0	0	4
21:00	12	0	0	0	0	0	12
21:15	5	0	0	0	0	0	5
21:30	12	0	0	0	0	0	12
21:45	4	0	0	0	0	0	4
22:00	9	0	0	0	0	0	9
22:15	7	0	0	0	0	0	7
22:30	1	0	0	0	0	0	1
22:45	7	0	0	0	0	0	7
23:00	3	0	0	0	0	0	3
23:15	3	0	0	0	0	0	3
23:30	4	0	0	0	0	0	4
23:45	2	0	0	0	0	0	2
TOTAL	314	6	2	1	0	0	323

AM PEAK HOUR	5:45 PM
AM PEAK VOLUME	38

TOTAL: AM+PM	489	25	5	2	0	0	521
% OF TOTAL	93.9%	4.8%	1.0%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY8 Dwy west of Amargosa Rd (Applebee's Grill-Bar)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	12:00	21	0	0	1	0	0	22
0:15	5	0	0	0	0	0	5	12:15	17	0	0	0	0	0	17
0:30	3	1	0	0	0	0	4	12:30	21	0	0	0	0	0	21
0:45	5	0	0	0	0	0	5	12:45	18	0	0	1	0	0	19
1:00	2	0	0	0	0	0	2	13:00	6	0	0	0	0	0	6
1:15	2	0	0	0	0	0	2	13:15	17	1	0	0	1	1	20
1:30	4	0	0	0	0	0	4	13:30	9	1	0	1	0	0	11
1:45	2	0	0	0	0	0	2	13:45	11	1	0	0	0	0	12
2:00	2	0	0	0	0	0	2	14:00	11	5	1	0	0	0	17
2:15	3	0	0	0	0	0	3	14:15	14	1	0	0	0	0	15
2:30	2	0	0	0	0	0	2	14:30	20	0	0	0	0	0	20
2:45	0	0	0	0	0	0	0	14:45	11	0	0	0	0	0	11
3:00	4	0	0	0	0	0	4	15:00	23	1	0	0	0	0	24
3:15	2	0	0	0	0	0	2	15:15	17	0	0	0	0	0	17
3:30	2	2	0	0	0	0	4	15:30	25	0	0	0	0	0	25
3:45	5	0	0	0	0	0	5	15:45	16	0	0	0	0	0	16
4:00	4	0	0	0	0	0	4	16:00	22	0	0	0	0	0	22
4:15	5	2	0	0	0	0	7	16:15	19	0	0	0	0	0	19
4:30	3	4	0	0	0	0	7	16:30	15	1	0	0	0	0	16
4:45	10	0	0	0	0	0	10	16:45	11	0	0	0	0	0	11
5:00	5	0	0	0	0	0	5	17:00	11	0	0	0	0	0	11
5:15	2	2	0	0	0	0	4	17:15	24	1	0	0	0	0	25
5:30	3	1	0	0	0	0	4	17:30	23	0	0	0	0	0	23
5:45	5	1	0	0	0	0	6	17:45	18	1	0	0	0	0	19
6:00	5	1	0	0	0	0	6	18:00	21	0	0	0	0	0	21
6:15	8	0	0	0	0	0	8	18:15	24	0	0	0	0	0	24
6:30	6	1	0	0	0	0	7	18:30	20	0	0	0	0	0	20
6:45	6	0	0	0	0	0	6	18:45	25	0	0	0	0	0	25
7:00	6	1	0	0	0	0	7	19:00	23	0	0	0	0	0	23
7:15	9	1	0	0	0	0	10	19:15	18	0	1	0	0	0	19
7:30	11	1	1	0	0	0	13	19:30	22	0	0	0	0	0	22
7:45	6	2	1	0	0	0	9	19:45	12	0	0	0	0	0	12
8:00	5	3	0	2	0	0	10	20:00	18	0	0	0	0	0	18
8:15	6	0	0	0	0	0	6	20:15	20	0	0	0	0	0	20
8:30	11	0	0	1	0	0	12	20:30	7	0	0	1	0	0	8
8:45	12	2	1	0	0	0	15	20:45	10	0	0	0	0	0	10
9:00	8	1	1	0	0	0	10	21:00	20	0	0	0	0	0	20
9:15	16	1	0	0	0	0	17	21:15	23	0	0	0	0	0	23
9:30	19	1	0	0	0	0	20	21:30	26	0	0	0	0	0	26
9:45	13	0	0	0	0	0	13	21:45	8	1	0	0	0	0	9
10:00	11	0	0	0	0	0	11	22:00	18	0	0	0	0	0	18
10:15	7	0	0	0	0	0	7	22:15	10	0	0	0	0	0	10
10:30	10	0	0	0	0	0	10	22:30	10	0	0	0	0	0	10
10:45	14	2	0	1	0	0	17	22:45	12	0	0	0	0	0	12
11:00	13	0	0	0	0	0	13	23:00	4	0	0	1	0	0	5
11:15	18	0	0	0	0	0	18	23:15	7	0	0	0	0	0	7
11:30	8	1	1	0	0	0	10	23:30	5	1	0	0	0	0	6
11:45	21	0	0	1	0	0	22	23:45	3	0	0	0	0	0	3
TOTAL	337	31	5	5	0	0	378	**TOTAL**	766	15	2	5	1	1	790

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	63

AM PEAK HOUR	6:15 PM
AM PEAK VOLUME	92

TOTAL: AM+PM	1,103	46	7	10	1	1	1,168
% OF TOTAL	94.4%	3.9%	0.6%	0.9%	0.1%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY9 Dwy west of Amargosa Rd (Mimi's Cafe)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	7	0	0	0	0	0	7
0:15	0	0	0	0	0	0	0	12:15	4	0	0	0	0	0	4
0:30	0	0	0	0	0	0	0	12:30	5	0	0	0	0	0	5
0:45	0	0	0	0	0	0	0	12:45	3	0	0	0	0	0	3
1:00	0	0	0	0	0	0	0	13:00	4	0	0	0	0	0	4
1:15	0	0	0	0	0	0	0	13:15	3	0	0	0	0	0	3
1:30	0	0	0	0	0	0	0	13:30	6	0	0	1	0	0	7
1:45	0	0	0	0	0	0	0	13:45	2	1	0	0	0	0	3
2:00	0	0	0	0	0	0	0	14:00	5	0	0	0	0	0	5
2:15	0	0	0	0	0	0	0	14:15	4	0	0	0	0	0	4
2:30	0	0	0	0	0	0	0	14:30	7	0	0	0	0	0	7
2:45	0	0	0	0	0	0	0	14:45	9	1	0	0	0	0	10
3:00	0	0	0	0	0	0	0	15:00	5	0	0	0	0	0	5
3:15	0	0	0	0	0	0	0	15:15	8	0	0	0	0	0	8
3:30	0	0	0	0	0	0	0	15:30	7	0	0	0	0	0	7
3:45	0	0	0	0	0	0	0	15:45	8	0	0	0	0	0	8
4:00	0	0	0	0	0	0	0	16:00	6	0	0	0	0	0	6
4:15	0	0	0	0	0	0	0	16:15	4	0	0	0	0	0	4
4:30	0	0	0	0	0	0	0	16:30	9	0	0	1	0	0	10
4:45	0	0	0	0	0	0	0	16:45	5	0	0	0	0	0	5
5:00	0	0	0	0	0	0	0	17:00	10	0	0	0	0	0	10
5:15	0	0	0	0	0	0	0	17:15	9	0	0	1	0	0	10
5:30	0	1	0	0	0	0	1	17:30	4	0	0	0	0	0	4
5:45	2	0	0	0	0	0	2	17:45	5	0	0	0	0	0	5
6:00	1	0	0	0	0	0	1	18:00	6	0	0	0	0	0	6
6:15	0	0	0	0	0	0	0	18:15	6	0	0	0	0	0	6
6:30	0	0	0	0	0	0	0	18:30	2	0	0	0	0	0	2
6:45	2	0	0	0	0	0	2	18:45	3	0	0	0	0	0	3
7:00	3	0	0	0	0	0	3	19:00	2	0	0	0	0	0	2
7:15	0	0	0	0	0	0	0	19:15	6	0	0	0	0	0	6
7:30	0	0	0	0	0	0	0	19:30	3	0	0	0	0	0	3
7:45	1	0	0	0	0	0	1	19:45	6	0	0	0	0	0	6
8:00	2	0	0	0	0	0	2	20:00	5	1	0	0	0	0	6
8:15	3	0	0	0	0	0	3	20:15	2	0	0	0	0	0	2
8:30	4	0	0	0	0	0	4	20:30	2	0	0	0	0	0	2
8:45	4	0	0	0	0	0	4	20:45	2	0	0	0	0	0	2
9:00	3	0	0	0	0	0	3	21:00	3	0	0	0	0	0	3
9:15	5	0	0	0	0	0	5	21:15	0	0	0	0	0	0	0
9:30	2	0	0	0	0	0	2	21:30	3	0	0	0	0	0	3
9:45	9	0	0	0	0	0	9	21:45	3	0	0	0	0	0	3
10:00	4	0	0	0	0	0	4	22:00	2	0	0	0	0	0	2
10:15	6	0	0	0	0	0	6	22:15	2	0	0	0	0	0	2
10:30	9	0	0	0	0	0	9	22:30	1	0	0	0	0	0	1
10:45	6	0	0	0	0	0	6	22:45	1	0	0	0	0	0	1
11:00	5	0	0	0	0	0	5	23:00	1	0	0	0	0	0	1
11:15	7	0	0	0	0	0	7	23:15	0	0	0	0	0	0	0
11:30	5	0	1	0	0	0	6	23:30	1	0	0	0	0	0	1
11:45	6	0	0	0	0	0	6	23:45	0	0	0	0	0	0	0
TOTAL	89	1	1	0	0	0	91	**TOTAL**	201	3	0	3	0	0	207

AM PEAK HOUR	9:45 AM
AM PEAK VOLUME	28

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	35

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	290	4	1	3	0	0	298
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	97.3%	1.3%	0.3%	1.0%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	537	11	1	4	0	0	553
CLASS 6	Buses	**% OF TOTAL**	97.1%	2.0%	0.2%	0.7%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY9 Dwy west of Amargosa Rd (Mimi's Cafe)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	1	0	0	0	0	0	1
1:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	1	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	1	0	0	0	0	0	1
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0
7:00	1	0	0	0	0	0	1
7:15	2	0	0	0	0	0	2
7:30	0	0	0	1	0	0	1
7:45	1	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0
8:15	1	1	0	0	0	0	2
8:30	1	0	0	0	0	0	1
8:45	2	0	0	0	0	0	2
9:00	3	0	0	0	0	0	3
9:15	2	0	0	0	0	0	2
9:30	0	0	0	0	0	0	0
9:45	6	0	0	0	0	0	6
10:00	3	1	0	0	0	0	4
10:15	1	0	0	0	0	0	1
10:30	5	0	0	0	0	0	5
10:45	2	0	0	0	0	0	2
11:00	6	0	0	0	0	0	6
11:15	1	0	0	0	0	0	1
11:30	7	0	0	0	0	0	7
11:45	2	0	0	0	0	0	2
TOTAL	51	2	0	1	0	0	54

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	16

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	5	0	0	0	0	0	5
12:15	5	0	0	0	0	0	5
12:30	8	0	0	0	0	0	8
12:45	7	0	0	0	0	0	7
13:00	6	0	0	0	0	0	6
13:15	4	0	0	0	0	0	4
13:30	5	0	0	0	0	0	5
13:45	6	1	0	0	0	0	7
14:00	6	0	0	0	0	0	6
14:15	5	1	0	0	0	0	6
14:30	5	0	0	0	0	0	5
14:45	4	0	0	0	0	0	4
15:00	2	0	0	0	0	0	2
15:15	4	0	0	0	0	0	4
15:30	3	1	0	0	0	0	4
15:45	3	0	0	0	0	0	3
16:00	4	0	0	0	0	0	4
16:15	3	1	0	0	0	0	4
16:30	0	0	0	0	0	0	0
16:45	7	0	0	0	0	0	7
17:00	5	0	0	0	0	0	5
17:15	7	0	0	0	0	0	7
17:30	7	0	0	0	0	0	7
17:45	10	0	0	0	0	0	10
18:00	2	0	0	0	0	0	2
18:15	4	0	0	0	0	0	4
18:30	10	0	0	0	0	0	10
18:45	6	0	0	0	0	0	6
19:00	3	0	0	0	0	0	3
19:15	3	0	0	0	0	0	3
19:30	2	0	0	0	0	0	2
19:45	4	0	0	0	0	0	4
20:00	1	0	0	0	0	0	1
20:15	3	0	0	0	0	0	3
20:30	7	0	0	0	0	0	7
20:45	1	0	0	0	0	0	1
21:00	4	0	0	0	0	0	4
21:15	3	0	0	0	0	0	3
21:30	2	0	0	0	0	0	2
21:45	4	0	0	0	0	0	4
22:00	1	0	0	0	0	0	1
22:15	5	0	0	0	0	0	5
22:30	1	0	0	0	0	0	1
22:45	2	0	0	0	0	0	2
23:00	3	0	0	0	0	0	3
23:15	1	1	0	0	0	0	2
23:30	1	0	0	0	0	0	1
23:45	2	0	0	0	0	0	2
TOTAL	196	5	0	0	0	0	201

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	29

TOTAL: AM+PM	247	7	0	1	0	0	255
% OF TOTAL	96.9%	2.7%	0.0%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY9 Dwy west of Amargosa Rd (Mimi's Cafe)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	12	0	0	0	0	0	12
0:15	0	0	0	0	0	0	0	12:15	9	0	0	0	0	0	9
0:30	0	0	0	0	0	0	0	12:30	13	0	0	0	0	0	13
0:45	1	0	0	0	0	0	1	12:45	10	0	0	0	0	0	10
1:00	1	0	0	0	0	0	1	13:00	10	0	0	0	0	0	10
1:15	0	0	0	0	0	0	0	13:15	7	0	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	11	0	0	1	0	0	12
1:45	1	0	0	0	0	0	1	13:45	8	2	0	0	0	0	10
2:00	0	0	0	0	0	0	0	14:00	11	0	0	0	0	0	11
2:15	0	0	0	0	0	0	0	14:15	9	1	0	0	0	0	10
2:30	0	0	0	0	0	0	0	14:30	12	0	0	0	0	0	12
2:45	0	0	0	0	0	0	0	14:45	13	1	0	0	0	0	14
3:00	0	0	0	0	0	0	0	15:00	7	0	0	0	0	0	7
3:15	0	0	0	0	0	0	0	15:15	12	0	0	0	0	0	12
3:30	0	0	0	0	0	0	0	15:30	10	1	0	0	0	0	11
3:45	0	0	0	0	0	0	0	15:45	11	0	0	0	0	0	11
4:00	0	0	0	0	0	0	0	16:00	10	0	0	0	0	0	10
4:15	0	0	0	0	0	0	0	16:15	7	1	0	0	0	0	8
4:30	0	0	0	0	0	0	0	16:30	9	0	0	1	0	0	10
4:45	0	0	0	0	0	0	0	16:45	12	0	0	0	0	0	12
5:00	1	0	0	0	0	0	1	17:00	15	0	0	0	0	0	15
5:15	0	0	0	0	0	0	0	17:15	16	0	0	1	0	0	17
5:30	0	1	0	0	0	0	1	17:30	11	0	0	0	0	0	11
5:45	2	0	0	0	0	0	2	17:45	15	0	0	0	0	0	15
6:00	1	0	0	0	0	0	1	18:00	8	0	0	0	0	0	8
6:15	0	0	0	0	0	0	0	18:15	10	0	0	0	0	0	10
6:30	0	0	0	0	0	0	0	18:30	12	0	0	0	0	0	12
6:45	2	0	0	0	0	0	2	18:45	9	0	0	0	0	0	9
7:00	4	0	0	0	0	0	4	19:00	5	0	0	0	0	0	5
7:15	2	0	0	0	0	0	2	19:15	9	0	0	0	0	0	9
7:30	0	0	0	1	0	0	1	19:30	5	0	0	0	0	0	5
7:45	2	0	0	0	0	0	2	19:45	10	0	0	0	0	0	10
8:00	2	0	0	0	0	0	2	20:00	6	1	0	0	0	0	7
8:15	4	1	0	0	0	0	5	20:15	5	0	0	0	0	0	5
8:30	5	0	0	0	0	0	5	20:30	9	0	0	0	0	0	9
8:45	6	0	0	0	0	0	6	20:45	3	0	0	0	0	0	3
9:00	6	0	0	0	0	0	6	21:00	7	0	0	0	0	0	7
9:15	7	0	0	0	0	0	7	21:15	3	0	0	0	0	0	3
9:30	2	0	0	0	0	0	2	21:30	5	0	0	0	0	0	5
9:45	15	0	0	0	0	0	15	21:45	7	0	0	0	0	0	7
10:00	7	1	0	0	0	0	8	22:00	3	0	0	0	0	0	3
10:15	7	0	0	0	0	0	7	22:15	7	0	0	0	0	0	7
10:30	14	0	0	0	0	0	14	22:30	2	0	0	0	0	0	2
10:45	8	0	0	0	0	0	8	22:45	3	0	0	0	0	0	3
11:00	11	0	0	0	0	0	11	23:00	4	0	0	0	0	0	4
11:15	8	0	0	0	0	0	8	23:15	1	1	0	0	0	0	2
11:30	12	0	1	0	0	0	13	23:30	2	0	0	0	0	0	2
11:45	8	0	0	0	0	0	8	23:45	2	0	0	0	0	0	2
TOTAL	140	3	1	1	0	0	145	TOTAL	397	8	0	3	0	0	408

AM PEAK HOUR	9:45 AM	AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	44	AM PEAK VOLUME	58

TOTAL: AM+PM	537	11	1	4	0	0	553
% OF TOTAL	97.1%	2.0%	0.2%	0.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY10 Dwy west of Amargosa Rd (Freddy's Frozen)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	11	0	0	0	0	0	11
0:15	1	0	0	0	0	0	1	12:15	11	0	0	0	0	0	11
0:30	0	0	0	0	0	0	0	12:30	15	0	0	0	0	0	15
0:45	1	0	0	0	0	0	1	12:45	4	0	0	0	0	0	4
1:00	0	0	0	0	0	0	0	13:00	7	1	0	0	0	0	8
1:15	0	0	0	0	0	0	0	13:15	8	0	0	0	0	0	8
1:30	0	0	0	0	0	0	0	13:30	5	1	0	0	0	0	6
1:45	0	0	0	0	0	0	0	13:45	10	0	0	0	0	0	10
2:00	0	0	0	0	0	0	0	14:00	8	1	0	0	0	0	9
2:15	0	0	0	0	0	0	0	14:15	6	0	0	0	0	0	6
2:30	0	0	0	0	0	0	0	14:30	6	0	0	0	0	0	6
2:45	0	0	0	0	0	0	0	14:45	8	0	0	0	0	0	8
3:00	0	0	0	0	0	0	0	15:00	8	0	0	0	0	0	8
3:15	0	0	0	0	0	0	0	15:15	10	0	0	0	0	0	10
3:30	0	0	0	0	0	0	0	15:30	14	0	0	0	0	0	14
3:45	0	0	0	0	0	0	0	15:45	13	0	0	0	0	0	13
4:00	0	0	0	0	0	0	0	16:00	6	0	0	0	0	0	6
4:15	0	0	0	0	0	0	0	16:15	7	0	0	0	0	0	7
4:30	0	0	0	0	0	0	0	16:30	9	0	0	0	0	0	9
4:45	0	0	0	0	0	0	0	16:45	10	0	0	0	0	0	10
5:00	0	0	0	0	0	0	0	17:00	10	0	0	0	0	0	10
5:15	0	0	0	0	0	0	0	17:15	8	0	0	0	0	0	8
5:30	0	0	0	0	0	0	0	17:30	5	0	0	0	0	0	5
5:45	0	0	0	0	0	0	0	17:45	15	0	0	0	0	0	15
6:00	1	0	0	0	0	0	1	18:00	9	1	0	0	0	0	10
6:15	2	0	0	0	0	0	2	18:15	7	0	0	0	0	0	7
6:30	0	0	0	0	0	0	0	18:30	4	0	0	0	0	0	4
6:45	1	0	0	0	0	0	1	18:45	5	0	0	1	0	0	6
7:00	0	0	0	1	0	0	1	19:00	8	0	0	0	0	0	8
7:15	1	0	0	1	0	0	2	19:15	8	0	0	0	0	0	8
7:30	0	0	0	0	0	0	0	19:30	5	0	0	0	0	0	5
7:45	1	0	0	0	0	0	1	19:45	10	0	0	0	0	0	10
8:00	4	0	0	0	0	0	4	20:00	5	0	0	0	0	0	5
8:15	2	0	0	0	0	0	2	20:15	9	0	0	0	0	0	9
8:30	2	0	0	0	0	0	2	20:30	7	0	0	0	0	0	7
8:45	3	0	0	0	0	0	3	20:45	5	0	0	0	0	0	5
9:00	7	1	0	0	0	0	8	21:00	5	0	0	0	0	0	5
9:15	3	0	0	0	0	0	3	21:15	3	0	0	0	0	0	3
9:30	3	0	0	0	0	0	3	21:30	2	0	0	0	0	0	2
9:45	6	1	0	0	0	0	7	21:45	4	0	0	0	0	0	4
10:00	4	1	0	0	0	0	5	22:00	1	0	0	0	0	0	1
10:15	5	0	0	0	0	0	5	22:15	1	0	0	0	0	0	1
10:30	3	0	0	1	0	0	4	22:30	1	0	0	0	0	0	1
10:45	5	0	0	0	0	0	5	22:45	0	0	0	0	0	0	0
11:00	7	0	0	0	0	0	7	23:00	0	0	0	0	0	0	0
11:15	8	0	0	0	0	0	8	23:15	0	0	0	0	0	0	0
11:30	12	0	0	0	0	0	12	23:30	1	0	0	0	0	0	1
11:45	5	0	0	1	0	0	6	23:45	0	1	0	0	0	0	1
TOTAL	88	3	0	4	0	0	95	TOTAL	314	5	0	1	0	0	320

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	33

AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	45

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	402	8	0	5	0	0	415
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.9%	1.9%	0.0%	1.2%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	707	19	2	5	0	0	733
CLASS 6	Buses	% OF TOTAL	96.5%	2.6%	0.3%	0.7%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY10 Dwy west of Amargosa Rd (Freddy's Frozen)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	1	0	0	0	0	0	1
0:45	1	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	2	0	0	0	0	0	2
7:00	1	0	0	0	0	0	1
7:15	0	1	0	0	0	0	1
7:30	1	0	0	0	0	0	1
7:45	0	0	0	0	0	0	0
8:00	2	0	0	0	0	0	2
8:15	1	0	0	0	0	0	1
8:30	2	0	0	0	0	0	2
8:45	1	0	0	0	0	0	1
9:00	1	0	0	0	0	0	1
9:15	2	0	0	0	0	0	2
9:30	2	0	0	0	0	0	2
9:45	4	0	0	0	0	0	4
10:00	2	0	0	0	0	0	2
10:15	4	0	0	0	0	0	4
10:30	3	0	0	0	0	0	3
10:45	2	0	0	0	0	0	2
11:00	9	0	0	0	0	0	9
11:15	8	1	0	0	0	0	9
11:30	4	0	0	0	0	0	4
11:45	5	0	0	0	0	0	5
TOTAL	59	2	0	0	0	0	61

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	27

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	3	1	1	0	0	0	5
12:15	2	1	0	0	0	0	3
12:30	9	0	0	0	0	0	9
12:45	6	0	0	0	0	0	6
13:00	8	1	0	0	0	0	9
13:15	7	0	0	0	0	0	7
13:30	8	2	0	0	0	0	10
13:45	12	0	0	0	0	0	12
14:00	5	0	0	0	0	0	5
14:15	4	1	0	0	0	0	5
14:30	4	0	0	0	0	0	4
14:45	8	1	0	0	0	0	9
15:00	5	0	0	0	0	0	5
15:15	5	0	0	0	0	0	5
15:30	9	0	1	0	0	0	10
15:45	5	1	0	0	0	0	6
16:00	6	0	0	0	0	0	6
16:15	11	0	0	0	0	0	11
16:30	7	0	0	0	0	0	7
16:45	8	0	0	0	0	0	8
17:00	6	0	0	0	0	0	6
17:15	4	0	0	0	0	0	4
17:30	8	0	0	0	0	0	8
17:45	8	0	0	0	0	0	8
18:00	5	0	0	0	0	0	5
18:15	7	0	0	0	0	0	7
18:30	3	0	0	0	0	0	3
18:45	10	0	0	0	0	0	10
19:00	4	0	0	0	0	0	4
19:15	6	0	0	0	0	0	6
19:30	4	0	0	0	0	0	4
19:45	5	1	0	0	0	0	6
20:00	6	0	0	0	0	0	6
20:15	4	0	0	0	0	0	4
20:30	4	0	0	0	0	0	4
20:45	8	0	0	0	0	0	8
21:00	5	0	0	0	0	0	5
21:15	5	0	0	0	0	0	5
21:30	6	0	0	0	0	0	6
21:45	2	0	0	0	0	0	2
22:00	1	0	0	0	0	0	1
22:15	1	0	0	0	0	0	1
22:30	0	0	0	0	0	0	0
22:45	1	0	0	0	0	0	1
23:00	1	0	0	0	0	0	1
23:15	0	0	0	0	0	0	0
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	246	9	2	0	0	0	257

AM PEAK HOUR	1:00 PM
AM PEAK VOLUME	38

TOTAL: AM+PM		305	11	2	0	0	0	318
% OF TOTAL		95.9%	3.5%	0.6%	0.0%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY10 Dwy west of Amargosa Rd (Freddy's Frozen)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	14	1	1	0	0	0	16
0:15	1	0	0	0	0	0	1	12:15	13	1	0	0	0	0	14
0:30	1	0	0	0	0	0	1	12:30	24	0	0	0	0	0	24
0:45	2	0	0	0	0	0	2	12:45	10	0	0	0	0	0	10
1:00	0	0	0	0	0	0	0	13:00	15	2	0	0	0	0	17
1:15	0	0	0	0	0	0	0	13:15	15	0	0	0	0	0	15
1:30	0	0	0	0	0	0	0	13:30	13	3	0	0	0	0	16
1:45	0	0	0	0	0	0	0	13:45	22	0	0	0	0	0	22
2:00	0	0	0	0	0	0	0	14:00	13	1	0	0	0	0	14
2:15	0	0	0	0	0	0	0	14:15	10	1	0	0	0	0	11
2:30	0	0	0	0	0	0	0	14:30	10	0	0	0	0	0	10
2:45	0	0	0	0	0	0	0	14:45	16	1	0	0	0	0	17
3:00	0	0	0	0	0	0	0	15:00	13	0	0	0	0	0	13
3:15	0	0	0	0	0	0	0	15:15	15	0	0	0	0	0	15
3:30	0	0	0	0	0	0	0	15:30	23	0	1	0	0	0	24
3:45	0	0	0	0	0	0	0	15:45	18	1	0	0	0	0	19
4:00	0	0	0	0	0	0	0	16:00	12	0	0	0	0	0	12
4:15	0	0	0	0	0	0	0	16:15	18	0	0	0	0	0	18
4:30	0	0	0	0	0	0	0	16:30	16	0	0	0	0	0	16
4:45	0	0	0	0	0	0	0	16:45	18	0	0	0	0	0	18
5:00	0	0	0	0	0	0	0	17:00	16	0	0	0	0	0	16
5:15	0	0	0	0	0	0	0	17:15	12	0	0	0	0	0	12
5:30	0	0	0	0	0	0	0	17:30	13	0	0	0	0	0	13
5:45	0	0	0	0	0	0	0	17:45	23	0	0	0	0	0	23
6:00	2	0	0	0	0	0	2	18:00	14	1	0	0	0	0	15
6:15	2	0	0	0	0	0	2	18:15	14	0	0	0	0	0	14
6:30	0	0	0	0	0	0	0	18:30	7	0	0	0	0	0	7
6:45	3	0	0	0	0	0	3	18:45	15	0	0	1	0	0	16
7:00	1	0	0	1	0	0	2	19:00	12	0	0	0	0	0	12
7:15	1	1	0	1	0	0	3	19:15	14	0	0	0	0	0	14
7:30	1	0	0	0	0	0	1	19:30	9	0	0	0	0	0	9
7:45	1	0	0	0	0	0	1	19:45	15	1	0	0	0	0	16
8:00	6	0	0	0	0	0	6	20:00	11	0	0	0	0	0	11
8:15	3	0	0	0	0	0	3	20:15	13	0	0	0	0	0	13
8:30	4	0	0	0	0	0	4	20:30	11	0	0	0	0	0	11
8:45	4	0	0	0	0	0	4	20:45	13	0	0	0	0	0	13
9:00	8	1	0	0	0	0	9	21:00	10	0	0	0	0	0	10
9:15	5	0	0	0	0	0	5	21:15	8	0	0	0	0	0	8
9:30	5	0	0	0	0	0	5	21:30	8	0	0	0	0	0	8
9:45	10	1	0	0	0	0	11	21:45	6	0	0	0	0	0	6
10:00	6	1	0	0	0	0	7	22:00	2	0	0	0	0	0	2
10:15	9	0	0	0	0	0	9	22:15	2	0	0	0	0	0	2
10:30	6	0	0	1	0	0	7	22:30	1	0	0	0	0	0	1
10:45	7	0	0	0	0	0	7	22:45	1	0	0	0	0	0	1
11:00	16	0	0	0	0	0	16	23:00	1	0	0	0	0	0	1
11:15	16	1	0	0	0	0	17	23:15	0	0	0	0	0	0	0
11:30	16	0	0	0	0	0	16	23:30	1	0	0	0	0	0	1
11:45	10	0	0	1	0	0	11	23:45	0	1	0	0	0	0	1
TOTAL	147	5	0	4	0	0	156	TOTAL	560	14	2	1	0	0	577

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	60

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	73

TOTAL: AM+PM	707	19	2	5	0	0	733
% OF TOTAL	96.5%	2.6%	0.3%	0.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY11 Dwy west of Amargosa Rd (Johnny Carino's)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	16	1	0	0	0	0	17
0:15	0	0	0	0	0	0	0	12:15	17	0	1	0	0	0	18
0:30	0	0	0	0	0	0	0	12:30	12	1	0	0	0	0	13
0:45	0	0	0	0	0	0	0	12:45	6	0	0	0	0	0	6
1:00	0	0	0	0	0	0	0	13:00	6	0	0	0	0	0	6
1:15	0	0	0	0	0	0	0	13:15	6	1	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	13	1	0	1	0	0	15
1:45	0	0	0	0	0	0	0	13:45	11	0	0	0	0	0	11
2:00	0	0	0	0	0	0	0	14:00	6	0	0	1	0	0	7
2:15	0	0	0	0	0	0	0	14:15	2	0	0	0	0	0	2
2:30	0	0	0	0	0	0	0	14:30	4	0	0	0	0	0	4
2:45	0	0	0	0	0	0	0	14:45	7	0	1	1	0	0	9
3:00	0	0	0	0	0	0	0	15:00	11	0	0	0	0	0	11
3:15	0	0	0	0	0	0	0	15:15	8	0	0	0	0	0	8
3:30	0	0	0	0	0	0	0	15:30	5	0	0	0	0	0	5
3:45	0	0	0	0	0	0	0	15:45	10	0	0	0	0	0	10
4:00	0	0	0	0	0	0	0	16:00	13	0	0	0	0	0	13
4:15	0	0	0	0	0	0	0	16:15	13	0	0	0	0	0	13
4:30	0	0	0	0	0	0	0	16:30	10	0	0	0	0	0	10
4:45	0	0	0	0	0	0	0	16:45	7	0	0	0	0	0	7
5:00	0	0	0	0	0	0	0	17:00	7	1	0	0	0	0	8
5:15	0	0	0	0	0	0	0	17:15	13	0	0	0	0	0	13
5:30	0	0	0	0	0	0	0	17:30	9	0	0	0	0	0	9
5:45	1	0	0	0	0	0	1	17:45	9	0	0	0	0	0	9
6:00	2	0	0	0	0	0	2	18:00	10	0	0	0	0	0	10
6:15	1	0	0	0	0	0	1	18:15	14	0	0	0	0	0	14
6:30	0	0	0	0	0	0	0	18:30	16	0	0	0	0	0	16
6:45	0	0	0	0	0	0	0	18:45	11	0	0	0	0	0	11
7:00	1	0	0	0	0	0	1	19:00	4	0	0	0	0	0	4
7:15	2	0	0	0	0	0	2	19:15	14	0	0	0	0	0	14
7:30	2	0	0	0	0	0	2	19:30	2	0	0	0	0	0	2
7:45	1	0	0	0	0	0	1	19:45	8	0	0	0	0	0	8
8:00	5	0	0	0	0	0	5	20:00	9	0	0	0	0	0	9
8:15	2	0	0	0	0	0	2	20:15	7	0	0	0	0	0	7
8:30	7	0	0	0	0	0	7	20:30	2	0	0	0	0	0	2
8:45	4	0	0	0	0	0	4	20:45	5	0	0	0	0	0	5
9:00	4	0	0	0	0	0	4	21:00	0	0	0	0	0	0	0
9:15	9	1	0	0	0	0	10	21:15	2	0	0	0	0	0	2
9:30	3	0	0	0	0	0	3	21:30	3	0	0	0	0	0	3
9:45	2	1	0	0	0	0	3	21:45	1	0	0	0	0	0	1
10:00	4	0	0	0	0	0	4	22:00	2	0	0	0	0	0	2
10:15	5	0	0	1	0	0	6	22:15	0	0	0	0	0	0	0
10:30	6	0	0	0	0	0	6	22:30	0	0	0	0	0	0	0
10:45	4	0	0	0	0	0	4	22:45	0	0	0	0	0	0	0
11:00	10	0	0	0	0	0	10	23:00	1	0	0	0	0	0	1
11:15	6	2	0	0	0	0	8	23:15	0	0	0	0	0	0	0
11:30	9	0	0	0	0	0	9	23:30	0	0	0	0	0	0	0
11:45	11	0	0	0	0	0	11	23:45	0	0	0	0	0	0	0
TOTAL	101	4	0	1	0	0	106	TOTAL	332	5	2	3	0	0	342

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	38

AM PEAK HOUR	12:00 PM
AM PEAK VOLUME	54

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	433	9	2	4	0	0	448
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	96.7%	2.0%	0.4%	0.9%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	778	18	2	10	0	0	808
CLASS 6	Buses	% OF TOTAL	96.3%	2.2%	0.2%	1.2%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY11 Dwy west of Amargosa Rd (Johnny Carino's)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1
6:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0
8:15	5	0	0	1	0	0	6
8:30	1	0	0	0	0	0	1
8:45	4	0	0	0	0	0	4
9:00	4	0	0	0	0	0	4
9:15	6	1	0	0	0	0	7
9:30	6	0	0	0	0	0	6
9:45	4	1	0	0	0	0	5
10:00	3	1	0	0	0	0	4
10:15	5	0	0	0	0	0	5
10:30	8	0	0	0	0	0	8
10:45	4	0	0	0	0	0	4
11:00	6	0	0	0	0	0	6
11:15	1	0	0	0	0	0	1
11:30	3	0	0	0	0	0	3
11:45	5	1	0	0	0	0	6
TOTAL	66	4	0	1	0	0	71

AM PEAK HOUR	10:15 AM
AM PEAK VOLUME	23

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	5	0	0	0	0	0	5
12:15	7	1	0	0	0	0	8
12:30	1	0	0	0	0	0	1
12:45	6	0	0	0	0	0	6
13:00	6	0	0	1	0	0	7
13:15	10	0	0	0	0	0	10
13:30	13	0	0	0	0	0	13
13:45	4	0	0	0	0	0	4
14:00	2	1	0	1	0	0	4
14:15	11	0	0	0	0	0	11
14:30	4	0	0	0	0	0	4
14:45	7	0	0	0	0	0	7
15:00	10	0	0	0	0	0	10
15:15	5	0	0	0	0	0	5
15:30	4	0	0	0	0	0	4
15:45	9	0	0	0	0	0	9
16:00	4	1	0	0	0	0	5
16:15	4	1	0	0	0	0	5
16:30	4	0	0	0	0	0	4
16:45	8	0	0	0	0	0	8
17:00	14	0	0	0	0	0	14
17:15	9	0	0	1	0	0	10
17:30	11	0	0	0	0	0	11
17:45	8	0	0	0	0	0	8
18:00	7	1	0	0	0	0	8
18:15	3	0	0	0	0	0	3
18:30	11	0	0	0	0	0	11
18:45	6	0	0	0	0	0	6
19:00	9	0	0	0	0	0	9
19:15	5	0	0	1	0	0	6
19:30	5	0	0	0	0	0	5
19:45	10	0	0	0	0	0	10
20:00	5	0	0	0	0	0	5
20:15	6	0	0	0	0	0	6
20:30	10	0	0	0	0	0	10
20:45	9	0	0	0	0	0	9
21:00	2	0	0	1	0	0	3
21:15	5	0	0	0	0	0	5
21:30	7	0	0	0	0	0	7
21:45	4	0	0	0	0	0	4
22:00	4	0	0	0	0	0	4
22:15	0	0	0	0	0	0	0
22:30	1	0	0	0	0	0	1
22:45	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0
23:15	1	0	0	0	0	0	1
23:30	2	0	0	0	0	0	2
23:45	1	0	0	0	0	0	1
TOTAL	279	5	0	5	0	0	289

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	43

TOTAL: AM+PM	345	9	0	6	0	0	360
% OF TOTAL	95.8%	2.5%	0.0%	1.7%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY11 Dwy west of Amargosa Rd (Johnny Carino's)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	21	1	0	0	0	0	22
0:15	0	0	0	0	0	0	0	12:15	24	1	1	0	0	0	26
0:30	0	0	0	0	0	0	0	12:30	13	1	0	0	0	0	14
0:45	0	0	0	0	0	0	0	12:45	12	0	0	0	0	0	12
1:00	0	0	0	0	0	0	0	13:00	12	0	0	1	0	0	13
1:15	0	0	0	0	0	0	0	13:15	16	1	0	0	0	0	17
1:30	0	0	0	0	0	0	0	13:30	26	1	0	1	0	0	28
1:45	0	0	0	0	0	0	0	13:45	15	0	0	0	0	0	15
2:00	0	0	0	0	0	0	0	14:00	8	1	0	2	0	0	11
2:15	0	0	0	0	0	0	0	14:15	13	0	0	0	0	0	13
2:30	0	0	0	0	0	0	0	14:30	8	0	0	0	0	0	8
2:45	0	0	0	0	0	0	0	14:45	14	0	1	1	0	0	16
3:00	0	0	0	0	0	0	0	15:00	21	0	0	0	0	0	21
3:15	0	0	0	0	0	0	0	15:15	13	0	0	0	0	0	13
3:30	0	0	0	0	0	0	0	15:30	9	0	0	0	0	0	9
3:45	0	0	0	0	0	0	0	15:45	19	0	0	0	0	0	19
4:00	0	0	0	0	0	0	0	16:00	17	1	0	0	0	0	18
4:15	0	0	0	0	0	0	0	16:15	17	1	0	0	0	0	18
4:30	0	0	0	0	0	0	0	16:30	14	0	0	0	0	0	14
4:45	0	0	0	0	0	0	0	16:45	15	0	0	0	0	0	15
5:00	0	0	0	0	0	0	0	17:00	21	1	0	0	0	0	22
5:15	0	0	0	0	0	0	0	17:15	22	0	0	1	0	0	23
5:30	0	0	0	0	0	0	0	17:30	20	0	0	0	0	0	20
5:45	1	0	0	0	0	0	1	17:45	17	0	0	0	0	0	17
6:00	3	0	0	0	0	0	3	18:00	17	1	0	0	0	0	18
6:15	1	0	0	0	0	0	1	18:15	17	0	0	0	0	0	17
6:30	0	0	0	0	0	0	0	18:30	27	0	0	0	0	0	27
6:45	0	0	0	0	0	0	0	18:45	17	0	0	0	0	0	17
7:00	1	0	0	0	0	0	1	19:00	13	0	0	0	0	0	13
7:15	2	0	0	0	0	0	2	19:15	19	0	0	1	0	0	20
7:30	2	0	0	0	0	0	2	19:30	7	0	0	0	0	0	7
7:45	1	0	0	0	0	0	1	19:45	18	0	0	0	0	0	18
8:00	5	0	0	0	0	0	5	20:00	14	0	0	0	0	0	14
8:15	7	0	0	1	0	0	8	20:15	13	0	0	0	0	0	13
8:30	8	0	0	0	0	0	8	20:30	12	0	0	0	0	0	12
8:45	8	0	0	0	0	0	8	20:45	14	0	0	0	0	0	14
9:00	8	0	0	0	0	0	8	21:00	2	0	0	1	0	0	3
9:15	15	2	0	0	0	0	17	21:15	7	0	0	0	0	0	7
9:30	9	0	0	0	0	0	9	21:30	10	0	0	0	0	0	10
9:45	6	2	0	0	0	0	8	21:45	5	0	0	0	0	0	5
10:00	7	1	0	0	0	0	8	22:00	6	0	0	0	0	0	6
10:15	10	0	0	1	0	0	11	22:15	0	0	0	0	0	0	0
10:30	14	0	0	0	0	0	14	22:30	1	0	0	0	0	0	1
10:45	8	0	0	0	0	0	8	22:45	0	0	0	0	0	0	0
11:00	16	0	0	0	0	0	16	23:00	1	0	0	0	0	0	1
11:15	7	2	0	0	0	0	9	23:15	1	0	0	0	0	0	1
11:30	12	0	0	0	0	0	12	23:30	2	0	0	0	0	0	2
11:45	16	1	0	0	0	0	17	23:45	1	0	0	0	0	0	1
TOTAL	167	8	0	2	0	0	177	**TOTAL**	611	10	2	8	0	0	631

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	54

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	82

TOTAL: AM+PM	778	18	2	10	0	0	808
% OF TOTAL	96.3%	2.2%	0.2%	1.2%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY12 Dwy west of Amargosa Rd (Main dwy to the Parking Lot)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	47	0	0	0	0	1	48
0:15	2	0	0	0	0	0	2	12:15	49	1	0	0	0	1	51
0:30	1	0	0	0	0	0	1	12:30	54	0	0	0	0	0	54
0:45	2	0	0	0	0	0	2	12:45	43	0	0	0	0	0	43
1:00	3	0	0	0	0	0	3	13:00	46	0	0	0	0	1	47
1:15	1	0	0	0	0	0	1	13:15	46	0	0	0	0	1	47
1:30	0	0	0	0	0	0	0	13:30	38	1	0	0	0	0	39
1:45	0	0	0	0	0	0	0	13:45	48	1	0	0	0	1	50
2:00	0	0	0	0	0	0	0	14:00	30	0	0	0	0	1	31
2:15	1	0	0	0	0	0	1	14:15	42	0	0	0	0	1	43
2:30	1	0	0	0	0	0	1	14:30	41	1	0	0	0	0	42
2:45	1	0	0	0	0	0	1	14:45	43	1	1	0	0	0	45
3:00	1	0	0	0	0	0	1	15:00	44	0	0	0	0	1	45
3:15	0	0	0	0	0	0	0	15:15	42	0	0	0	0	1	43
3:30	1	0	0	0	0	0	1	15:30	51	1	0	0	0	1	53
3:45	0	0	0	0	0	0	0	15:45	53	0	1	0	0	0	54
4:00	0	0	0	0	0	0	0	16:00	39	0	0	0	0	1	40
4:15	0	0	0	0	0	0	0	16:15	49	0	0	0	0	0	49
4:30	4	0	0	0	0	0	4	16:30	49	0	1	1	0	1	52
4:45	6	0	0	0	0	0	6	16:45	53	0	0	0	0	1	54
5:00	1	1	0	0	0	0	2	17:00	33	0	0	0	0	1	34
5:15	1	1	0	0	0	0	2	17:15	54	0	0	0	0	0	54
5:30	3	1	0	0	0	0	4	17:30	46	0	0	1	0	0	47
5:45	8	0	0	0	0	0	8	17:45	35	0	0	0	0	2	37
6:00	17	0	0	0	0	0	17	18:00	41	0	0	0	0	0	41
6:15	10	0	1	0	0	0	11	18:15	43	0	0	0	0	0	43
6:30	17	0	0	0	0	0	17	18:30	38	0	0	0	0	0	38
6:45	15	0	0	0	0	1	16	18:45	51	0	0	0	0	1	52
7:00	18	1	0	0	0	0	19	19:00	45	0	0	0	0	0	45
7:15	16	0	0	0	0	0	16	19:15	28	1	0	0	0	0	29
7:30	14	0	0	0	0	0	14	19:30	43	0	0	0	0	0	43
7:45	16	0	0	0	0	1	17	19:45	38	0	0	0	0	0	38
8:00	26	0	0	1	0	0	27	20:00	44	0	0	1	0	1	46
8:15	36	1	0	1	0	0	38	20:15	25	1	0	0	0	0	26
8:30	32	0	0	0	0	0	32	20:30	36	1	0	1	0	0	38
8:45	33	0	0	0	0	1	34	20:45	30	0	0	0	0	0	30
9:00	35	1	0	1	0	1	38	21:00	21	0	0	0	0	1	22
9:15	37	0	0	0	0	1	38	21:15	25	0	0	0	0	0	25
9:30	28	0	0	0	0	0	28	21:30	21	0	0	0	0	0	21
9:45	46	1	0	0	0	0	47	21:45	13	0	0	0	0	0	13
10:00	46	0	0	0	0	1	47	22:00	13	0	0	0	0	0	13
10:15	51	0	0	0	0	0	51	22:15	11	0	0	0	0	0	11
10:30	48	2	0	0	0	1	51	22:30	6	0	1	0	0	0	7
10:45	42	1	0	0	0	1	44	22:45	7	0	0	0	0	0	7
11:00	48	0	0	0	0	1	49	23:00	2	0	0	0	0	0	2
11:15	44	0	0	0	0	0	44	23:15	2	0	0	0	0	0	2
11:30	46	1	0	0	0	0	47	23:30	1	0	0	0	0	0	1
11:45	45	0	0	0	0	1	46	23:45	0	0	0	0	0	0	0
TOTAL	804	11	1	3	0	10	829	TOTAL	1,659	9	4	4	0	19	1,695

AM PEAK HOUR	9:45 AM	AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	196	AM PEAK VOLUME	196

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	2,463	20	5	7	0	29	2,524
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	97.6%	0.8%	0.2%	0.3%	0.0%	1.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	5,019	46	9	17	1	57	5,149
CLASS 6	Buses	% OF TOTAL	97.5%	0.9%	0.2%	0.3%	0.0%	1.1%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY12 Dwy west of Amargosa Rd (Main dwy to the Parking Lot)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	2	0	0	0	0	0	2
0:15	4	0	0	0	0	0	4
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	4	0	0	0	0	0	4
1:15	1	0	0	0	0	0	1
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	1	0	0	0	0	0	1
2:15	1	0	0	0	0	0	1
2:30	0	0	0	0	0	0	0
2:45	1	0	0	0	0	0	1
3:00	1	0	0	0	0	0	1
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	1	0	0	0	0	0	1
4:30	0	0	0	0	0	0	0
4:45	1	0	0	0	0	0	1
5:00	2	1	0	0	0	0	3
5:15	0	0	0	0	0	0	0
5:30	1	0	0	0	0	0	1
5:45	1	0	0	0	0	0	1
6:00	9	0	0	0	0	1	10
6:15	8	0	0	0	0	0	8
6:30	12	0	1	0	0	0	13
6:45	19	0	0	1	0	0	20
7:00	18	1	0	0	0	1	20
7:15	19	1	0	0	0	0	20
7:30	22	0	0	0	0	0	22
7:45	16	0	0	0	0	0	16
8:00	14	0	0	0	0	1	15
8:15	15	0	0	0	0	0	15
8:30	32	0	0	0	0	0	32
8:45	27	0	0	1	0	0	28
9:00	32	0	0	0	0	1	33
9:15	29	1	0	0	0	0	30
9:30	39	1	0	0	0	1	41
9:45	33	0	0	0	0	0	33
10:00	41	1	0	0	0	0	42
10:15	32	0	0	0	0	1	33
10:30	38	0	0	0	0	0	38
10:45	45	2	0	0	1	1	49
11:00	49	1	0	0	0	1	51
11:15	50	0	0	0	0	0	50
11:30	42	0	0	0	0	1	43
11:45	51	0	0	0	0	0	51
TOTAL	714	9	1	2	1	9	736

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	195

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	48	0	0	0	0	1	49
12:15	51	3	0	0	0	1	55
12:30	45	0	0	0	0	1	46
12:45	49	1	0	1	0	0	51
13:00	59	0	0	0	0	0	59
13:15	42	0	0	0	0	1	43
13:30	42	1	0	1	0	1	45
13:45	48	0	0	0	0	0	48
14:00	52	1	0	0	0	0	53
14:15	38	1	1	0	0	2	42
14:30	34	0	0	0	0	1	35
14:45	49	0	0	1	0	0	50
15:00	47	1	1	0	0	0	49
15:15	42	2	0	0	0	1	45
15:30	42	1	0	0	0	1	44
15:45	44	1	0	0	0	0	45
16:00	54	0	0	0	0	1	55
16:15	45	0	0	0	0	1	46
16:30	59	0	0	0	0	0	59
16:45	41	0	0	0	0	1	42
17:00	55	1	0	1	0	1	58
17:15	38	0	0	0	0	0	38
17:30	41	0	0	0	0	0	41
17:45	57	0	0	0	0	0	57
18:00	45	1	0	0	0	1	47
18:15	44	0	0	0	0	1	45
18:30	35	0	0	0	0	0	35
18:45	60	1	0	0	0	0	61
19:00	45	1	0	0	0	0	46
19:15	41	0	0	1	0	1	43
19:30	39	0	0	1	0	0	40
19:45	42	0	0	1	0	0	43
20:00	39	0	0	0	0	0	39
20:15	56	0	0	1	0	1	58
20:30	43	0	0	0	0	0	43
20:45	33	0	0	0	0	0	33
21:00	28	0	0	0	0	1	29
21:15	24	1	0	0	0	0	25
21:30	24	0	0	0	0	0	24
21:45	17	0	0	0	0	0	17
22:00	23	0	0	0	0	0	23
22:15	18	0	0	0	0	0	18
22:30	14	0	0	0	0	0	14
22:45	22	0	0	0	0	0	22
23:00	13	0	0	0	0	0	13
23:15	6	0	1	0	0	0	7
23:30	3	0	0	0	0	0	3
23:45	6	0	0	0	0	0	6
TOTAL	1,842	17	3	8	0	19	1,889

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	211

TOTAL: AM+PM	2,556	26	4	10	1	28	2,625
% OF TOTAL	97.4%	1.0%	0.2%	0.4%	0.0%	1.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY12 Dwy west of Amargosa Rd (Main dwy to the Parking Lot)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	3	0	0	0	0	0	3	12:00	95	0	0	0	0	2	97
0:15	6	0	0	0	0	0	6	12:15	100	4	0	0	0	2	106
0:30	2	0	0	0	0	0	2	12:30	99	0	0	0	0	1	100
0:45	2	0	0	0	0	0	2	12:45	92	1	0	1	0	0	94
1:00	7	0	0	0	0	0	7	13:00	105	0	0	0	0	1	106
1:15	2	0	0	0	0	0	2	13:15	88	0	0	0	0	2	90
1:30	0	0	0	0	0	0	0	13:30	80	2	0	1	0	1	84
1:45	0	0	0	0	0	0	0	13:45	96	1	0	0	0	1	98
2:00	1	0	0	0	0	0	1	14:00	82	1	0	0	0	1	84
2:15	2	0	0	0	0	0	2	14:15	80	1	1	0	0	3	85
2:30	1	0	0	0	0	0	1	14:30	75	1	0	0	0	1	77
2:45	2	0	0	0	0	0	2	14:45	92	1	1	1	0	0	95
3:00	2	0	0	0	0	0	2	15:00	91	1	1	0	0	1	94
3:15	0	0	0	0	0	0	0	15:15	84	2	0	0	0	2	88
3:30	1	0	0	0	0	0	1	15:30	93	2	0	0	0	2	97
3:45	0	0	0	0	0	0	0	15:45	97	1	1	0	0	0	99
4:00	0	0	0	0	0	0	0	16:00	93	0	0	0	0	2	95
4:15	1	0	0	0	0	0	1	16:15	94	0	0	0	0	1	95
4:30	4	0	0	0	0	0	4	16:30	108	0	1	1	0	1	111
4:45	7	0	0	0	0	0	7	16:45	94	0	0	0	0	2	96
5:00	3	2	0	0	0	0	5	17:00	88	1	0	1	0	2	92
5:15	1	1	0	0	0	0	2	17:15	92	0	0	0	0	0	92
5:30	4	1	0	0	0	0	5	17:30	87	0	0	1	0	0	88
5:45	9	0	0	0	0	0	9	17:45	92	0	0	0	0	2	94
6:00	26	0	0	0	0	1	27	18:00	86	1	0	0	0	1	88
6:15	18	0	1	0	0	0	19	18:15	87	0	0	0	0	1	88
6:30	29	0	1	0	0	0	30	18:30	73	0	0	0	0	0	73
6:45	34	0	0	1	0	1	36	18:45	111	1	0	0	0	1	113
7:00	36	2	0	0	0	1	39	19:00	90	1	0	0	0	0	91
7:15	35	1	0	0	0	0	36	19:15	69	1	0	1	0	1	72
7:30	36	0	0	0	0	0	36	19:30	82	0	0	1	0	0	83
7:45	32	0	0	0	0	1	33	19:45	80	0	0	1	0	0	81
8:00	40	0	0	1	0	1	42	20:00	83	0	0	1	0	1	85
8:15	51	1	0	1	0	0	53	20:15	81	1	0	1	0	1	84
8:30	64	0	0	0	0	0	64	20:30	79	1	0	1	0	0	81
8:45	60	0	0	1	0	1	62	20:45	63	0	0	0	0	0	63
9:00	67	1	0	1	0	2	71	21:00	49	0	0	0	0	2	51
9:15	66	1	0	0	0	1	68	21:15	49	1	0	0	0	0	50
9:30	67	1	0	0	0	1	69	21:30	45	0	0	0	0	0	45
9:45	79	1	0	0	0	0	80	21:45	30	0	0	0	0	0	30
10:00	87	1	0	0	0	1	89	22:00	36	0	0	0	0	0	36
10:15	83	0	0	0	0	1	84	22:15	29	0	0	0	0	0	29
10:30	86	2	0	0	0	1	89	22:30	20	0	1	0	0	0	21
10:45	87	3	0	0	1	2	93	22:45	29	0	0	0	0	0	29
11:00	97	1	0	0	0	2	100	23:00	15	0	0	0	0	0	15
11:15	94	0	0	0	0	0	94	23:15	8	0	1	0	0	0	9
11:30	88	1	0	0	0	1	90	23:30	4	0	0	0	0	0	4
11:45	96	0	0	0	0	1	97	23:45	6	0	0	0	0	0	6
TOTAL	1,518	20	2	5	1	19	1,565	**TOTAL**	3,501	26	7	12	0	38	3,584

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	381

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	406

TOTAL: AM+PM	5,019	46	9	17	1	57	5,149
% OF TOTAL	97.5%	0.9%	0.2%	0.3%	0.0%	1.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY13 Dwy west of Amargosa Rd (south of Main dwy)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	20	0	0	0	0	0	20
0:15	0	0	0	0	0	0	0	12:15	10	0	0	0	0	0	10
0:30	0	0	0	0	0	0	0	12:30	19	0	0	0	0	0	19
0:45	1	0	0	0	0	0	1	12:45	17	0	0	0	0	0	17
1:00	0	0	0	0	0	0	0	13:00	15	0	0	0	0	0	15
1:15	0	0	0	0	0	0	0	13:15	25	2	0	1	0	0	28
1:30	0	0	0	0	0	0	0	13:30	21	0	0	0	0	0	21
1:45	0	0	0	0	0	0	0	13:45	18	0	0	0	0	0	18
2:00	0	0	0	0	0	0	0	14:00	20	0	0	0	0	0	20
2:15	0	0	0	0	0	0	0	14:15	22	1	0	0	0	0	23
2:30	0	0	0	0	0	0	0	14:30	13	0	0	0	0	0	13
2:45	1	0	0	0	0	0	1	14:45	17	1	0	0	0	0	18
3:00	1	0	0	0	0	0	1	15:00	11	0	0	0	0	0	11
3:15	0	0	0	0	0	0	0	15:15	21	0	0	0	0	0	21
3:30	1	0	0	0	0	0	1	15:30	14	0	0	0	0	0	14
3:45	2	0	0	0	0	0	2	15:45	14	1	0	0	0	0	15
4:00	1	0	0	0	0	0	1	16:00	19	0	0	0	0	0	19
4:15	0	0	0	0	0	0	0	16:15	23	0	0	0	0	0	23
4:30	2	0	0	0	0	0	2	16:30	27	0	0	0	0	0	27
4:45	1	0	0	0	0	0	1	16:45	14	0	0	0	0	0	14
5:00	4	0	0	0	0	0	4	17:00	20	0	0	0	0	0	20
5:15	3	0	0	0	0	0	3	17:15	16	0	0	0	0	0	16
5:30	2	0	0	0	0	0	2	17:30	17	1	0	0	0	0	18
5:45	6	0	0	0	0	0	6	17:45	13	0	0	0	0	0	13
6:00	3	0	0	0	0	0	3	18:00	18	0	0	0	0	0	18
6:15	10	0	0	0	0	0	10	18:15	26	0	0	0	0	0	26
6:30	8	0	0	0	0	0	8	18:30	20	0	0	1	0	0	21
6:45	13	3	0	0	0	0	16	18:45	21	0	0	0	0	0	21
7:00	4	1	0	0	0	0	5	19:00	16	0	0	0	0	0	16
7:15	10	0	0	0	0	0	10	19:15	15	0	0	0	0	0	15
7:30	9	0	0	0	0	0	9	19:30	11	0	0	1	0	0	12
7:45	3	0	0	0	0	0	3	19:45	15	0	0	0	0	0	15
8:00	9	0	0	0	0	0	9	20:00	19	0	0	0	0	0	19
8:15	5	0	0	0	0	0	5	20:15	15	0	0	0	0	0	15
8:30	9	0	0	0	0	0	9	20:30	11	0	0	0	0	0	11
8:45	11	0	0	0	0	0	11	20:45	17	0	0	0	0	0	17
9:00	24	0	0	0	0	0	24	21:00	11	1	0	0	0	0	12
9:15	11	0	0	0	0	0	11	21:15	10	0	0	0	0	0	10
9:30	17	0	0	0	0	0	17	21:30	6	0	0	0	0	0	6
9:45	17	1	0	0	0	0	18	21:45	23	0	0	0	0	0	23
10:00	20	0	0	0	0	0	20	22:00	8	0	0	0	0	0	8
10:15	20	0	0	0	0	0	20	22:15	6	0	0	0	0	0	6
10:30	24	0	0	0	0	0	24	22:30	5	0	0	0	0	0	5
10:45	18	0	0	0	0	0	18	22:45	1	0	0	0	0	0	1
11:00	25	0	0	0	0	0	25	23:00	1	0	0	0	0	0	1
11:15	11	0	0	0	0	0	11	23:15	1	0	0	0	0	0	1
11:30	26	0	0	1	0	0	27	23:30	3	0	0	0	0	0	3
11:45	16	0	0	0	0	0	16	23:45	0	0	0	0	0	0	0
TOTAL	349	5	0	1	0	0	355	TOTAL	705	7	0	3	0	0	715
	AM PEAK HOUR						10:15 AM						AM PEAK HOUR		1:15 PM
	AM PEAK VOLUME						87						AM PEAK VOLUME		87

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	1,054	12	0	4	0	0	1,070
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	98.5%	1.1%	0.0%	0.4%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	2,082	26	2	6	1	0	2,117
CLASS 6	Buses	% OF TOTAL	98.3%	1.2%	0.1%	0.3%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY13 Dwy west of Amargosa Rd (south of Main dwy)

AM TIME	OUT 1	2	3	4	5	6	TOTAL	PM Time	OUT 1	2	3	4	5	6	TOTAL
0:00	4	0	0	0	0	0	4	12:00	15	0	0	0	0	0	15
0:15	1	0	0	0	0	0	1	12:15	13	0	0	0	0	0	13
0:30	0	0	0	0	0	0	0	12:30	20	0	0	0	0	0	20
0:45	1	0	0	0	0	0	1	12:45	18	0	0	0	0	0	18
1:00	1	0	0	0	0	0	1	13:00	14	2	1	0	0	0	17
1:15	1	0	0	0	0	0	1	13:15	20	0	0	0	0	0	20
1:30	0	0	0	0	0	0	0	13:30	19	0	0	0	0	0	19
1:45	0	0	0	0	0	0	0	13:45	24	1	0	0	0	0	25
2:00	2	0	0	0	0	0	2	14:00	26	0	0	0	0	0	26
2:15	0	0	0	0	0	0	0	14:15	16	1	0	1	1	0	19
2:30	0	0	0	0	0	0	0	14:30	17	1	0	0	0	0	18
2:45	0	0	0	0	0	0	0	14:45	21	0	0	0	0	0	21
3:00	0	0	0	0	0	0	0	15:00	13	0	0	0	0	0	13
3:15	0	0	0	0	0	0	0	15:15	19	0	0	0	0	0	19
3:30	0	0	0	0	0	0	0	15:30	17	0	1	1	0	0	19
3:45	0	0	0	0	0	0	0	15:45	23	0	0	0	0	0	23
4:00	1	0	0	0	0	0	1	16:00	28	0	0	0	0	0	28
4:15	0	0	0	0	0	0	0	16:15	19	0	0	0	0	0	19
4:30	0	0	0	0	0	0	0	16:30	13	1	0	0	0	0	14
4:45	0	0	0	0	0	0	0	16:45	27	0	0	0	0	0	27
5:00	1	0	0	0	0	0	1	17:00	19	0	0	0	0	0	19
5:15	0	0	0	0	0	0	0	17:15	18	0	0	0	0	0	18
5:30	1	0	0	0	0	0	1	17:30	23	0	0	0	0	0	23
5:45	1	0	0	0	0	0	1	17:45	16	0	0	0	0	0	16
6:00	1	0	0	0	0	0	1	18:00	25	0	0	0	0	0	25
6:15	2	0	0	0	0	0	2	18:15	16	0	0	0	0	0	16
6:30	6	0	0	0	0	0	6	18:30	15	0	0	0	0	0	15
6:45	0	0	0	0	0	0	0	18:45	17	1	0	0	0	0	18
7:00	19	1	0	0	0	0	20	19:00	14	0	0	0	0	0	14
7:15	4	0	0	0	0	0	4	19:15	21	0	0	0	0	0	21
7:30	3	0	0	0	0	0	3	19:30	16	0	0	0	0	0	16
7:45	3	0	0	0	0	0	3	19:45	23	0	0	0	0	0	23
8:00	10	0	0	0	0	0	10	20:00	18	0	0	0	0	0	18
8:15	5	0	0	0	0	0	5	20:15	15	0	0	0	0	0	15
8:30	3	0	0	0	0	0	3	20:30	15	0	0	0	0	0	15
8:45	7	0	0	0	0	0	7	20:45	15	0	0	0	0	0	15
9:00	10	0	0	0	0	0	10	21:00	17	0	0	0	0	0	17
9:15	9	1	0	0	0	0	10	21:15	18	0	0	0	0	0	18
9:30	11	0	0	0	0	0	11	21:30	13	0	0	0	0	0	13
9:45	13	0	0	0	0	0	13	21:45	5	0	0	0	0	0	5
10:00	14	2	0	0	0	0	16	22:00	13	0	0	0	0	0	13
10:15	12	1	0	0	0	0	13	22:15	10	0	0	0	0	0	10
10:30	17	1	0	0	0	0	18	22:30	5	0	0	0	0	0	5
10:45	17	0	0	0	0	0	17	22:45	7	0	0	0	0	0	7
11:00	19	0	0	0	0	0	19	23:00	6	0	0	0	0	0	6
11:15	24	1	0	0	0	0	25	23:15	3	0	0	0	0	0	3
11:30	17	0	0	0	0	0	17	23:30	1	0	0	0	0	0	1
11:45	20	0	0	0	0	0	20	23:45	2	0	0	0	0	0	2
TOTAL	260	7	0	0	0	0	267	**TOTAL**	768	7	2	2	1	0	780
				AM PEAK HOUR			11:00 AM							**AM PEAK HOUR**	1:15 PM
				AM PEAK VOLUME			81							**AM PEAK VOLUME**	90

TOTAL: AM+PM	1,028	14	2	2	1	0	1,047
% OF TOTAL	98.2%	1.3%	0.2%	0.2%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY13 Dwy west of Amargosa Rd (south of Main dwy)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	5	0	0	0	0	0	5	12:00	35	0	0	0	0	0	35
0:15	1	0	0	0	0	0	1	12:15	23	0	0	0	0	0	23
0:30	0	0	0	0	0	0	0	12:30	39	0	0	0	0	0	39
0:45	2	0	0	0	0	0	2	12:45	35	0	0	0	0	0	35
1:00	1	0	0	0	0	0	1	13:00	29	2	1	0	0	0	32
1:15	1	0	0	0	0	0	1	13:15	45	2	0	1	0	0	48
1:30	0	0	0	0	0	0	0	13:30	40	0	0	0	0	0	40
1:45	0	0	0	0	0	0	0	13:45	42	1	0	0	0	0	43
2:00	2	0	0	0	0	0	2	14:00	46	0	0	0	0	0	46
2:15	0	0	0	0	0	0	0	14:15	38	2	0	1	1	0	42
2:30	0	0	0	0	0	0	0	14:30	30	1	0	0	0	0	31
2:45	1	0	0	0	0	0	1	14:45	38	1	0	0	0	0	39
3:00	1	0	0	0	0	0	1	15:00	24	0	0	0	0	0	24
3:15	0	0	0	0	0	0	0	15:15	40	0	0	0	0	0	40
3:30	1	0	0	0	0	0	1	15:30	31	0	1	1	0	0	33
3:45	2	0	0	0	0	0	2	15:45	37	1	0	0	0	0	38
4:00	2	0	0	0	0	0	2	16:00	47	0	0	0	0	0	47
4:15	0	0	0	0	0	0	0	16:15	42	0	0	0	0	0	42
4:30	2	0	0	0	0	0	2	16:30	40	1	0	0	0	0	41
4:45	1	0	0	0	0	0	1	16:45	41	0	0	0	0	0	41
5:00	5	0	0	0	0	0	5	17:00	39	0	0	0	0	0	39
5:15	3	0	0	0	0	0	3	17:15	34	0	0	0	0	0	34
5:30	3	0	0	0	0	0	3	17:30	40	1	0	0	0	0	41
5:45	7	0	0	0	0	0	7	17:45	29	0	0	0	0	0	29
6:00	4	0	0	0	0	0	4	18:00	43	0	0	0	0	0	43
6:15	12	0	0	0	0	0	12	18:15	42	0	0	0	0	0	42
6:30	14	0	0	0	0	0	14	18:30	35	0	0	1	0	0	36
6:45	13	3	0	0	0	0	16	18:45	38	1	0	0	0	0	39
7:00	23	2	0	0	0	0	25	19:00	30	0	0	0	0	0	30
7:15	14	0	0	0	0	0	14	19:15	36	0	0	0	0	0	36
7:30	12	0	0	0	0	0	12	19:30	27	0	0	1	0	0	28
7:45	6	0	0	0	0	0	6	19:45	38	0	0	0	0	0	38
8:00	19	0	0	0	0	0	19	20:00	37	0	0	0	0	0	37
8:15	10	0	0	0	0	0	10	20:15	30	0	0	0	0	0	30
8:30	12	0	0	0	0	0	12	20:30	26	0	0	0	0	0	26
8:45	18	0	0	0	0	0	18	20:45	32	0	0	0	0	0	32
9:00	34	0	0	0	0	0	34	21:00	28	1	0	0	0	0	29
9:15	20	1	0	0	0	0	21	21:15	28	0	0	0	0	0	28
9:30	28	0	0	0	0	0	28	21:30	19	0	0	0	0	0	19
9:45	30	1	0	0	0	0	31	21:45	28	0	0	0	0	0	28
10:00	34	2	0	0	0	0	36	22:00	21	0	0	0	0	0	21
10:15	32	1	0	0	0	0	33	22:15	16	0	0	0	0	0	16
10:30	41	1	0	0	0	0	42	22:30	10	0	0	0	0	0	10
10:45	35	0	0	0	0	0	35	22:45	8	0	0	0	0	0	8
11:00	44	0	0	0	0	0	44	23:00	7	0	0	0	0	0	7
11:15	35	1	0	0	0	0	36	23:15	4	0	0	0	0	0	4
11:30	43	0	0	1	0	0	44	23:30	4	0	0	0	0	0	4
11:45	36	0	0	0	0	0	36	23:45	2	0	0	0	0	0	2
TOTAL	609	12	0	1	0	0	622	TOTAL	1,473	14	2	5	1	0	1,495

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	1:15 PM
AM PEAK VOLUME	160	AM PEAK VOLUME	177

TOTAL: AM+PM	2,082	26	2	6	1	0	2,117
% OF TOTAL	98.3%	1.2%	0.1%	0.3%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY14 Dwy west of Amargosa Rd (PV'S Fresh Grill and Tequila)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	6	0	0	0	0	0	6
0:15	1	0	0	0	0	0	1	12:15	18	1	0	0	0	0	19
0:30	3	0	0	0	0	0	3	12:30	12	0	0	0	0	0	12
0:45	0	0	0	0	0	0	0	12:45	20	0	0	0	0	0	20
1:00	0	1	0	0	0	0	1	13:00	10	0	0	0	0	0	10
1:15	0	0	0	0	0	0	0	13:15	7	0	0	0	0	0	7
1:30	0	0	0	0	0	0	0	13:30	13	0	0	0	1	0	14
1:45	1	0	0	0	0	0	1	13:45	15	0	0	0	0	0	15
2:00	0	0	0	0	0	0	0	14:00	9	0	0	0	0	0	9
2:15	0	0	0	0	0	0	0	14:15	13	0	0	0	0	0	13
2:30	0	0	0	0	0	0	0	14:30	11	0	0	0	0	0	11
2:45	0	0	0	0	0	0	0	14:45	14	1	0	0	0	0	15
3:00	0	0	0	0	0	0	0	15:00	8	0	0	0	0	0	8
3:15	0	0	0	0	0	0	0	15:15	13	0	0	0	0	0	13
3:30	1	0	0	0	0	0	1	15:30	12	0	0	0	0	0	12
3:45	3	0	0	0	0	0	3	15:45	15	1	0	0	0	0	16
4:00	1	0	0	0	0	0	1	16:00	19	1	0	0	0	0	20
4:15	1	0	0	0	0	0	1	16:15	10	0	0	0	0	0	10
4:30	0	0	0	0	0	0	0	16:30	16	0	0	0	0	0	16
4:45	3	0	0	0	0	0	3	16:45	20	0	0	0	0	0	20
5:00	2	0	0	0	0	0	2	17:00	19	0	0	0	0	0	19
5:15	0	0	0	0	0	0	0	17:15	18	1	0	0	0	0	19
5:30	1	0	0	0	0	0	1	17:30	11	0	0	0	0	0	11
5:45	1	0	0	0	0	0	1	17:45	19	1	0	0	0	0	20
6:00	3	0	0	0	0	0	3	18:00	16	1	0	0	0	0	17
6:15	0	0	0	0	0	0	0	18:15	9	0	0	0	0	0	9
6:30	1	0	0	0	0	0	1	18:30	19	0	0	0	0	0	19
6:45	8	0	0	0	0	0	8	18:45	12	0	0	0	0	0	12
7:00	4	1	0	0	0	0	5	19:00	8	0	0	0	0	0	8
7:15	6	1	0	0	0	0	7	19:15	19	0	0	0	0	0	19
7:30	4	0	0	0	0	0	4	19:30	14	0	0	0	0	0	14
7:45	7	0	0	0	0	0	7	19:45	6	0	0	0	0	0	6
8:00	3	0	0	1	0	0	4	20:00	16	1	0	0	0	0	17
8:15	9	0	0	0	0	0	9	20:15	17	0	0	0	0	0	17
8:30	6	0	0	0	0	0	6	20:30	6	0	0	1	0	0	7
8:45	6	0	0	0	0	0	6	20:45	11	0	0	0	0	0	11
9:00	9	2	0	0	0	0	11	21:00	7	0	0	0	0	0	7
9:15	8	2	0	1	0	0	11	21:15	5	0	0	0	0	0	5
9:30	9	1	0	0	0	0	10	21:30	5	0	0	0	0	0	5
9:45	11	0	0	0	0	0	11	21:45	6	0	0	0	0	0	6
10:00	10	1	0	0	0	0	11	22:00	6	0	0	0	0	0	6
10:15	5	0	0	0	0	0	5	22:15	5	0	0	0	0	0	5
10:30	7	0	0	0	0	0	7	22:30	6	0	0	0	0	0	6
10:45	12	0	0	0	0	0	12	22:45	2	0	0	0	0	0	2
11:00	15	0	0	0	0	0	15	23:00	2	0	0	0	0	0	2
11:15	9	1	0	1	0	0	11	23:15	1	0	0	1	0	0	2
11:30	13	0	0	0	0	0	13	23:30	1	0	0	0	0	0	1
11:45	11	1	0	0	0	0	12	23:45	0	0	0	0	0	0	0
TOTAL	195	11	0	3	0	0	209	**TOTAL**	527	8	0	2	1	0	538

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	51

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	74

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	722	19	0	5	1	0	747
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	96.7%	2.5%	0.0%	0.7%	0.1%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	1,463	41	3	9	2	0	1,518
CLASS 6	Buses	**% OF TOTAL**	96.4%	2.7%	0.2%	0.6%	0.1%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY14 Dwy west of Amargosa Rd (PV'S Fresh Grill and Tequila)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	4	0	0	0	0	0	4
0:15	3	0	0	0	0	0	3
0:30	10	0	0	0	0	0	10
0:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0
1:15	1	1	0	0	0	0	2
1:30	0	0	0	0	0	0	0
1:45	1	0	0	0	0	0	1
2:00	2	0	0	0	0	0	2
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	2	0	0	0	0	0	2
3:00	2	0	0	0	0	0	2
3:15	2	0	0	0	0	0	2
3:30	1	0	0	0	0	0	1
3:45	1	0	0	0	0	0	1
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	1	0	0	0	0	0	1
4:45	0	0	0	0	0	0	0
5:00	1	1	0	0	0	0	2
5:15	2	1	0	0	0	0	3
5:30	4	0	0	0	0	0	4
5:45	0	0	0	0	0	0	0
6:00	4	1	0	0	0	0	5
6:15	0	0	0	0	0	0	0
6:30	2	1	0	0	0	0	3
6:45	4	0	0	0	0	0	4
7:00	5	2	0	0	0	0	7
7:15	4	2	0	0	0	0	6
7:30	5	0	1	0	0	0	6
7:45	3	2	0	0	0	0	5
8:00	7	2	0	1	0	0	10
8:15	5	0	0	0	0	0	5
8:30	4	0	0	0	0	0	4
8:45	9	1	0	0	0	0	10
9:00	6	0	0	0	0	0	6
9:15	7	0	0	0	0	0	7
9:30	6	0	0	0	0	0	6
9:45	6	0	0	0	0	0	6
10:00	14	0	0	0	0	0	14
10:15	4	0	1	0	0	0	5
10:30	11	0	0	0	0	0	11
10:45	11	0	0	1	0	0	12
11:00	5	0	0	0	0	0	5
11:15	12	0	0	0	0	0	12
11:30	7	0	0	0	0	0	7
11:45	17	1	0	0	0	0	18
TOTAL	195	15	2	2	0	0	214

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	42

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	7	0	0	0	0	0	7
12:15	15	0	0	0	0	0	15
12:30	12	0	0	0	0	0	12
12:45	8	1	0	0	0	0	9
13:00	10	0	0	0	0	0	10
13:15	20	0	0	0	0	0	20
13:30	17	1	0	1	0	0	19
13:45	11	0	0	0	0	0	11
14:00	3	0	0	0	0	0	3
14:15	6	0	0	0	0	0	6
14:30	11	0	0	0	0	0	11
14:45	11	0	0	0	0	0	11
15:00	18	0	0	0	0	0	18
15:15	19	0	0	0	0	0	19
15:30	10	0	0	0	0	0	10
15:45	10	0	0	0	0	0	10
16:00	9	0	1	0	0	0	10
16:15	11	0	0	0	0	0	11
16:30	16	0	0	0	0	0	16
16:45	12	1	0	0	0	0	13
17:00	9	0	0	0	1	0	10
17:15	17	0	0	0	0	0	17
17:30	12	1	0	0	0	0	13
17:45	13	2	0	0	0	0	15
18:00	13	0	0	0	0	0	13
18:15	15	0	0	0	0	0	15
18:30	14	0	0	0	0	0	14
18:45	16	0	0	0	0	0	16
19:00	7	0	0	0	0	0	7
19:15	26	0	0	1	0	0	27
19:30	14	0	0	0	0	0	14
19:45	8	1	0	0	0	0	9
20:00	20	0	0	0	0	0	20
20:15	12	0	0	0	0	0	12
20:30	11	0	0	0	0	0	11
20:45	10	0	0	0	0	0	10
21:00	11	0	0	0	0	0	11
21:15	12	0	0	0	0	0	12
21:30	10	0	0	0	0	0	10
21:45	10	0	0	0	0	0	10
22:00	17	0	0	0	0	0	17
22:15	10	0	0	0	0	0	10
22:30	3	0	0	0	0	0	3
22:45	7	0	0	0	0	0	7
23:00	5	0	0	0	0	0	5
23:15	4	0	0	0	0	0	4
23:30	1	0	0	0	0	0	1
23:45	3	0	0	0	0	0	3
TOTAL	546	7	1	2	1	0	557

AM PEAK HOUR	7:15 PM
AM PEAK VOLUME	70

TOTAL: AM+PM		741	22	3	4	1	0	771
% OF TOTAL		96.1%	2.9%	0.4%	0.5%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY14 Dwy west of Amargosa Rd (PV'S Fresh Grill and Tequila)

AM	COMBINED							PM	COMBINED						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	5	0	0	0	0	0	5	12:00	13	0	0	0	0	0	13
0:15	4	0	0	0	0	0	4	12:15	33	1	0	0	0	0	34
0:30	13	0	0	0	0	0	13	12:30	24	0	0	0	0	0	24
0:45	0	0	0	0	0	0	0	12:45	28	1	0	0	0	0	29
1:00	0	1	0	0	0	0	1	13:00	20	0	0	0	0	0	20
1:15	1	1	0	0	0	0	2	13:15	27	0	0	0	0	0	27
1:30	0	0	0	0	0	0	0	13:30	30	1	0	1	1	0	33
1:45	2	0	0	0	0	0	2	13:45	26	0	0	0	0	0	26
2:00	2	0	0	0	0	0	2	14:00	12	0	0	0	0	0	12
2:15	0	0	0	0	0	0	0	14:15	19	0	0	0	0	0	19
2:30	0	0	0	0	0	0	0	14:30	22	0	0	0	0	0	22
2:45	2	0	0	0	0	0	2	14:45	25	1	0	0	0	0	26
3:00	2	0	0	0	0	0	2	15:00	26	0	0	0	0	0	26
3:15	2	0	0	0	0	0	2	15:15	32	0	0	0	0	0	32
3:30	2	0	0	0	0	0	2	15:30	22	0	0	0	0	0	22
3:45	4	0	0	0	0	0	4	15:45	25	1	0	0	0	0	26
4:00	1	0	0	0	0	0	1	16:00	28	1	1	0	0	0	30
4:15	1	0	0	0	0	0	1	16:15	21	0	0	0	0	0	21
4:30	1	0	0	0	0	0	1	16:30	32	0	0	0	0	0	32
4:45	3	0	0	0	0	0	3	16:45	32	1	0	0	0	0	33
5:00	3	1	0	0	0	0	4	17:00	28	0	0	0	1	0	29
5:15	2	1	0	0	0	0	3	17:15	35	1	0	0	0	0	36
5:30	5	0	0	0	0	0	5	17:30	23	1	0	0	0	0	24
5:45	1	0	0	0	0	0	1	17:45	32	3	0	0	0	0	35
6:00	7	1	0	0	0	0	8	18:00	29	1	0	0	0	0	30
6:15	0	0	0	0	0	0	0	18:15	24	0	0	0	0	0	24
6:30	3	1	0	0	0	0	4	18:30	33	0	0	0	0	0	33
6:45	12	0	0	0	0	0	12	18:45	28	0	0	0	0	0	28
7:00	9	3	0	0	0	0	12	19:00	15	0	0	0	0	0	15
7:15	10	3	0	0	0	0	13	19:15	45	0	0	1	0	0	46
7:30	9	0	1	0	0	0	10	19:30	28	0	0	0	0	0	28
7:45	10	2	0	0	0	0	12	19:45	14	1	0	0	0	0	15
8:00	10	2	0	2	0	0	14	20:00	36	1	0	0	0	0	37
8:15	14	0	0	0	0	0	14	20:15	29	0	0	0	0	0	29
8:30	10	0	0	0	0	0	10	20:30	17	0	0	1	0	0	18
8:45	15	1	0	0	0	0	16	20:45	21	0	0	0	0	0	21
9:00	15	2	0	0	0	0	17	21:00	18	0	0	0	0	0	18
9:15	15	2	0	1	0	0	18	21:15	17	0	0	0	0	0	17
9:30	15	1	0	0	0	0	16	21:30	15	0	0	0	0	0	15
9:45	17	0	0	0	0	0	17	21:45	16	0	0	0	0	0	16
10:00	24	1	0	0	0	0	25	22:00	23	0	0	0	0	0	23
10:15	9	0	1	0	0	0	10	22:15	15	0	0	0	0	0	15
10:30	18	0	0	0	0	0	18	22:30	9	0	0	0	0	0	9
10:45	23	0	0	1	0	0	24	22:45	9	0	0	0	0	0	9
11:00	20	0	0	0	0	0	20	23:00	7	0	0	0	0	0	7
11:15	21	1	0	1	0	0	23	23:15	5	0	0	1	0	0	6
11:30	20	0	0	0	0	0	20	23:30	2	0	0	0	0	0	2
11:45	28	2	0	0	0	0	30	23:45	3	0	0	0	0	0	3
TOTAL	390	26	2	5	0	0	423	TOTAL	1,073	15	1	4	2	0	1,095

AM PEAK HOUR	11:00 AM	AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	93	AM PEAK VOLUME	130

TOTAL: AM+PM	1,463	41	3	9	2	0	1,518
% OF TOTAL	96.4%	2.7%	0.2%	0.6%	0.1%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY15 Dwy west of Amargosa Rd (Starbucks Coffee)

AM	IN							PM	IN						
TIME	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	27	0	0	0	0	0	27
0:15	0	0	0	0	0	0	0	12:15	20	0	0	0	0	0	20
0:30	3	0	0	0	0	0	3	12:30	15	1	0	0	0	0	16
0:45	0	0	0	0	0	0	0	12:45	12	1	0	0	0	0	13
1:00	2	0	0	0	0	0	2	13:00	11	1	0	0	0	0	12
1:15	1	0	0	0	0	0	1	13:15	11	0	0	0	0	0	11
1:30	0	0	0	0	0	0	0	13:30	16	0	0	0	0	0	16
1:45	0	0	0	1	0	0	1	13:45	13	0	0	0	0	0	13
2:00	0	0	0	0	0	0	0	14:00	15	0	0	0	0	0	15
2:15	0	0	0	0	0	0	0	14:15	10	0	0	0	0	0	10
2:30	0	0	0	0	0	0	0	14:30	13	1	0	0	0	0	14
2:45	0	0	0	0	0	0	0	14:45	16	0	0	0	0	0	16
3:00	0	0	0	0	0	0	0	15:00	11	1	0	0	0	0	12
3:15	1	0	0	0	0	0	1	15:15	15	0	0	0	0	0	15
3:30	0	0	0	0	0	0	0	15:30	11	0	0	0	0	0	11
3:45	3	0	0	0	0	0	3	15:45	3	0	0	0	0	0	3
4:00	0	0	0	0	0	0	0	16:00	14	0	0	0	0	0	14
4:15	0	0	0	1	0	0	1	16:15	0	0	0	0	0	0	0
4:30	4	0	0	0	0	0	4	16:30	12	0	0	0	0	0	12
4:45	3	0	0	0	0	0	3	16:45	17	0	0	0	0	0	17
5:00	5	0	0	0	0	0	5	17:00	15	0	0	0	0	0	15
5:15	1	0	0	0	0	0	1	17:15	17	0	0	0	0	0	17
5:30	4	0	0	0	0	0	4	17:30	18	0	0	0	0	0	18
5:45	6	0	0	0	0	0	6	17:45	23	0	0	0	0	0	23
6:00	6	0	0	0	0	0	6	18:00	14	0	0	0	0	0	14
6:15	3	0	0	0	0	0	3	18:15	19	0	0	0	0	0	19
6:30	11	1	0	0	0	0	12	18:30	16	0	0	0	0	0	16
6:45	9	0	0	0	0	0	9	18:45	16	1	0	0	0	0	17
7:00	12	0	0	0	0	0	12	19:00	19	0	0	0	0	0	19
7:15	10	0	0	0	0	0	10	19:15	13	0	0	0	0	0	13
7:30	12	0	0	0	0	0	12	19:30	17	0	0	0	0	0	17
7:45	15	1	0	0	0	0	16	19:45	17	0	0	0	0	0	17
8:00	13	0	0	0	0	0	13	20:00	10	0	0	0	0	0	10
8:15	10	0	0	0	0	0	10	20:15	10	0	0	0	0	0	10
8:30	9	0	0	0	0	0	9	20:30	9	0	0	0	0	0	9
8:45	17	1	1	0	0	0	19	20:45	9	0	0	0	0	0	9
9:00	14	0	0	0	0	0	14	21:00	7	0	0	0	0	0	7
9:15	7	0	1	0	0	0	8	21:15	4	0	0	0	0	0	4
9:30	9	1	0	0	0	0	10	21:30	11	0	0	0	0	0	11
9:45	11	0	0	0	0	0	11	21:45	3	0	0	0	0	0	3
10:00	12	0	0	0	0	0	12	22:00	5	0	0	0	0	0	5
10:15	17	0	0	0	0	0	17	22:15	5	0	0	0	0	0	5
10:30	15	0	0	0	0	0	15	22:30	3	0	0	0	0	0	3
10:45	10	4	0	0	0	0	14	22:45	1	0	0	0	0	0	1
11:00	13	1	0	0	0	0	14	23:00	3	0	0	0	0	0	3
11:15	16	1	0	0	0	0	17	23:15	2	0	0	0	0	0	2
11:30	5	0	0	0	0	0	5	23:30	0	0	0	0	0	0	0
11:45	13	0	0	0	0	0	13	23:45	2	0	0	0	0	0	2
TOTAL	303	10	2	2	0	0	317	TOTAL	550	6	0	0	0	0	556

AM PEAK HOUR	10:30 AM	AM PEAK HOUR	12:00 PM
AM PEAK VOLUME	60	AM PEAK VOLUME	76

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	853	16	2	2	0	0	873
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	97.7%	1.8%	0.2%	0.2%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	1,609	34	3	5	0	0	1,651
CLASS 6	Buses	% OF TOTAL	97.5%	2.1%	0.2%	0.3%	0.0%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY15 Dwy west of Amargosa Rd (Starbucks Coffee)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	7	0	0	0	0	0	7
0:15	0	0	0	0	0	0	0
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	2	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	1	0	0	0	0	0	1
4:45	5	0	0	0	0	0	5
5:00	2	0	0	0	0	0	2
5:15	3	0	0	0	0	0	3
5:30	2	0	0	0	0	0	2
5:45	2	0	0	0	0	0	2
6:00	4	0	0	0	0	0	4
6:15	1	0	0	0	0	0	1
6:30	6	1	0	0	0	0	7
6:45	8	1	0	1	0	0	10
7:00	6	0	0	0	0	0	6
7:15	6	0	0	0	0	0	6
7:30	18	0	0	1	0	0	19
7:45	10	1	0	0	0	0	11
8:00	6	0	0	0	0	0	6
8:15	7	0	0	0	0	0	7
8:30	5	0	0	1	0	0	6
8:45	4	0	0	0	0	0	4
9:00	15	0	0	0	0	0	15
9:15	6	0	1	0	0	0	7
9:30	14	1	0	0	0	0	15
9:45	7	0	0	0	0	0	7
10:00	11	0	0	0	0	0	11
10:15	5	0	0	0	0	0	5
10:30	7	0	0	0	0	0	7
10:45	6	0	0	0	0	0	6
11:00	12	0	0	0	0	0	12
11:15	7	0	0	0	0	0	7
11:30	18	0	0	0	0	0	18
11:45	15	5	0	0	0	0	20
TOTAL	229	9	1	3	0	0	242

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	57

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	9	0	0	0	0	0	9
12:15	22	0	0	0	0	0	22
12:30	10	0	0	0	0	0	10
12:45	15	0	0	0	0	0	15
13:00	15	0	0	0	0	0	15
13:15	16	2	0	0	0	0	18
13:30	13	0	0	0	0	0	13
13:45	20	1	0	0	0	0	21
14:00	11	0	0	0	0	0	11
14:15	14	0	0	0	0	0	14
14:30	13	0	0	0	0	0	13
14:45	9	0	0	0	0	0	9
15:00	10	1	0	0	0	0	11
15:15	8	0	0	0	0	0	8
15:30	12	1	0	0	0	0	13
15:45	10	0	0	0	0	0	10
16:00	7	0	0	0	0	0	7
16:15	0	0	0	0	0	0	0
16:30	10	1	0	0	0	0	11
16:45	16	0	0	0	0	0	16
17:00	12	0	0	0	0	0	12
17:15	14	0	0	0	0	0	14
17:30	19	2	0	0	0	0	21
17:45	13	0	0	0	0	0	13
18:00	16	0	0	0	0	0	16
18:15	15	0	0	0	0	0	15
18:30	15	0	0	0	0	0	15
18:45	19	0	0	0	0	0	19
19:00	16	0	0	0	0	0	16
19:15	3	0	0	0	0	0	3
19:30	13	1	0	0	0	0	14
19:45	13	0	0	0	0	0	13
20:00	14	0	0	0	0	0	14
20:15	18	0	0	0	0	0	18
20:30	16	0	0	0	0	0	16
20:45	10	0	0	0	0	0	10
21:00	8	0	0	0	0	0	8
21:15	12	0	0	0	0	0	12
21:30	5	0	0	0	0	0	5
21:45	9	0	0	0	0	0	9
22:00	6	0	0	0	0	0	6
22:15	3	0	0	0	0	0	3
22:30	3	0	0	0	0	0	3
22:45	6	0	0	0	0	0	6
23:00	4	0	0	0	0	0	4
23:15	2	0	0	0	0	0	2
23:30	2	0	0	0	0	0	2
23:45	1	0	0	0	0	0	1
TOTAL	527	9	0	0	0	0	536

AM PEAK HOUR	1:00 PM
AM PEAK VOLUME	67

TOTAL: AM+PM	756	18	1	3	0	0	778
% OF TOTAL	97.2%	2.3%	0.1%	0.4%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY15 Dwy west of Amargosa Rd (Starbucks Coffee)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	12:00	36	0	0	0	0	0	36
0:15	0	0	0	0	0	0	0	12:15	42	0	0	0	0	0	42
0:30	4	0	0	0	0	0	4	12:30	25	1	0	0	0	0	26
0:45	0	0	0	0	0	0	0	12:45	27	1	0	0	0	0	28
1:00	4	0	0	0	0	0	4	13:00	26	1	0	0	0	0	27
1:15	1	0	0	0	0	0	1	13:15	27	2	0	0	0	0	29
1:30	0	0	0	0	0	0	0	13:30	29	0	0	0	0	0	29
1:45	0	0	0	1	0	0	1	13:45	33	1	0	0	0	0	34
2:00	0	0	0	0	0	0	0	14:00	26	0	0	0	0	0	26
2:15	0	0	0	0	0	0	0	14:15	24	0	0	0	0	0	24
2:30	0	0	0	0	0	0	0	14:30	26	1	0	0	0	0	27
2:45	0	0	0	0	0	0	0	14:45	25	0	0	0	0	0	25
3:00	0	0	0	0	0	0	0	15:00	21	2	0	0	0	0	23
3:15	1	0	0	0	0	0	1	15:15	23	0	0	0	0	0	23
3:30	0	0	0	0	0	0	0	15:30	23	1	0	0	0	0	24
3:45	3	0	0	0	0	0	3	15:45	13	0	0	0	0	0	13
4:00	0	0	0	0	0	0	0	16:00	21	0	0	0	0	0	21
4:15	0	0	0	1	0	0	1	16:15	0	0	0	0	0	0	0
4:30	5	0	0	0	0	0	5	16:30	22	1	0	0	0	0	23
4:45	8	0	0	0	0	0	8	16:45	33	0	0	0	0	0	33
5:00	7	0	0	0	0	0	7	17:00	27	0	0	0	0	0	27
5:15	4	0	0	0	0	0	4	17:15	31	0	0	0	0	0	31
5:30	6	0	0	0	0	0	6	17:30	37	2	0	0	0	0	39
5:45	8	0	0	0	0	0	8	17:45	36	0	0	0	0	0	36
6:00	10	0	0	0	0	0	10	18:00	30	0	0	0	0	0	30
6:15	4	0	0	0	0	0	4	18:15	34	0	0	0	0	0	34
6:30	17	2	0	0	0	0	19	18:30	31	0	0	0	0	0	31
6:45	17	1	0	1	0	0	19	18:45	35	1	0	0	0	0	36
7:00	18	0	0	0	0	0	18	19:00	35	0	0	0	0	0	35
7:15	16	0	0	0	0	0	16	19:15	16	0	0	0	0	0	16
7:30	30	0	0	1	0	0	31	19:30	30	1	0	0	0	0	31
7:45	25	2	0	0	0	0	27	19:45	30	0	0	0	0	0	30
8:00	19	0	0	0	0	0	19	20:00	24	0	0	0	0	0	24
8:15	17	0	0	0	0	0	17	20:15	28	0	0	0	0	0	28
8:30	14	0	0	1	0	0	15	20:30	25	0	0	0	0	0	25
8:45	21	1	1	0	0	0	23	20:45	19	0	0	0	0	0	19
9:00	29	0	0	0	0	0	29	21:00	15	0	0	0	0	0	15
9:15	13	0	2	0	0	0	15	21:15	16	0	0	0	0	0	16
9:30	23	2	0	0	0	0	25	21:30	16	0	0	0	0	0	16
9:45	18	0	0	0	0	0	18	21:45	12	0	0	0	0	0	12
10:00	23	0	0	0	0	0	23	22:00	11	0	0	0	0	0	11
10:15	22	0	0	0	0	0	22	22:15	8	0	0	0	0	0	8
10:30	22	0	0	0	0	0	22	22:30	6	0	0	0	0	0	6
10:45	16	4	0	0	0	0	20	22:45	7	0	0	0	0	0	7
11:00	25	1	0	0	0	0	26	23:00	7	0	0	0	0	0	7
11:15	23	1	0	0	0	0	24	23:15	4	0	0	0	0	0	4
11:30	23	0	0	0	0	0	23	23:30	2	0	0	0	0	0	2
11:45	28	5	0	0	0	0	33	23:45	3	0	0	0	0	0	3
TOTAL	532	19	3	5	0	0	559	TOTAL	1,077	15	0	0	0	0	1,092

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	106

AM PEAK HOUR	5:30 PM
AM PEAK VOLUME	139

TOTAL: AM+PM	1,609	34	3	5	0	0	1,651
% OF TOTAL	97.5%	2.1%	0.2%	0.3%	0.0%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY16 Dwy west of Amargosa Rd (The Habit Burger Grill)

AM TIME	IN 1	2	3	4	5	6	TOTAL	PM Time	IN 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	12	0	0	0	0	0	12
0:15	0	0	0	0	0	0	0	12:15	11	1	0	0	0	0	12
0:30	0	0	0	0	0	0	0	12:30	10	0	0	0	0	0	10
0:45	0	0	0	0	0	0	0	12:45	10	0	0	0	0	0	10
1:00	0	0	0	0	0	0	0	13:00	9	2	0	0	0	0	11
1:15	1	0	0	0	0	0	1	13:15	8	0	0	0	0	0	8
1:30	0	0	0	0	0	0	0	13:30	7	0	0	1	0	0	8
1:45	0	0	0	0	0	0	0	13:45	6	0	0	1	0	0	7
2:00	0	0	0	0	0	0	0	14:00	6	0	0	0	0	0	6
2:15	0	0	0	0	0	0	0	14:15	3	0	0	0	0	0	3
2:30	0	0	0	0	0	0	0	14:30	6	1	0	0	0	0	7
2:45	0	0	0	0	0	0	0	14:45	12	0	0	0	0	0	12
3:00	0	0	0	0	0	0	0	15:00	8	1	0	0	0	0	9
3:15	0	2	0	0	0	0	2	15:15	4	0	0	0	1	0	5
3:30	0	0	0	0	0	0	0	15:30	6	0	0	0	0	0	6
3:45	0	0	0	0	0	0	0	15:45	6	0	0	0	0	0	6
4:00	1	0	0	0	0	0	1	16:00	7	0	0	0	0	0	7
4:15	0	0	0	0	0	0	0	16:15	10	0	0	0	0	0	10
4:30	2	0	0	0	0	0	2	16:30	7	0	0	0	0	0	7
4:45	3	0	0	0	0	0	3	16:45	11	0	0	0	0	0	11
5:00	1	0	0	0	0	0	1	17:00	9	0	0	0	0	0	9
5:15	3	0	0	1	0	0	4	17:15	8	0	0	0	0	0	8
5:30	1	0	0	0	0	0	1	17:30	11	0	0	0	0	0	11
5:45	1	0	0	0	0	0	1	17:45	9	0	0	0	0	0	9
6:00	2	0	0	0	0	0	2	18:00	8	0	0	0	0	0	8
6:15	2	0	0	0	0	0	2	18:15	8	0	0	0	0	0	8
6:30	3	0	0	0	0	0	3	18:30	3	0	0	0	0	0	3
6:45	1	0	0	0	0	0	1	18:45	6	0	0	0	0	0	6
7:00	4	0	0	0	0	0	4	19:00	5	0	0	0	0	0	5
7:15	4	0	0	0	0	0	4	19:15	6	0	0	0	0	0	6
7:30	10	0	0	0	0	0	10	19:30	11	0	0	0	0	0	11
7:45	10	0	0	0	0	0	10	19:45	5	0	0	0	0	0	5
8:00	7	0	0	1	0	0	8	20:00	2	0	0	0	0	0	2
8:15	7	1	0	1	0	0	9	20:15	7	0	0	0	0	0	7
8:30	12	0	0	0	0	0	12	20:30	3	0	0	0	0	0	3
8:45	13	1	0	0	0	0	14	20:45	2	0	0	0	0	0	2
9:00	6	0	0	0	0	0	6	21:00	2	0	0	0	0	0	2
9:15	6	0	0	0	0	0	6	21:15	2	0	0	0	0	0	2
9:30	8	0	0	0	0	0	8	21:30	1	0	0	0	0	0	1
9:45	8	0	0	0	0	0	8	21:45	3	0	0	0	0	0	3
10:00	2	0	0	0	0	0	2	22:00	1	0	0	0	0	0	1
10:15	12	0	0	0	0	0	12	22:15	2	0	0	0	0	0	2
10:30	8	0	0	0	0	0	8	22:30	1	0	0	0	0	0	1
10:45	5	1	0	0	0	0	6	22:45	1	0	0	0	0	0	1
11:00	1	0	0	0	0	0	1	23:00	1	0	0	0	0	0	1
11:15	15	0	0	0	0	0	15	23:15	0	0	0	0	0	0	0
11:30	12	1	0	0	0	0	13	23:30	0	0	0	0	0	0	0
11:45	11	1	0	0	0	0	12	23:45	0	0	0	0	0	0	0
TOTAL	182	7	0	3	0	0	192	**TOTAL**	276	5	0	2	1	0	284

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	43

AM PEAK HOUR	12:00 PM
AM PEAK VOLUME	44

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	458	12	0	5	1	0	476
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	96.2%	2.5%	0.0%	1.1%	0.2%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	911	23	3	9	2	0	948
CLASS 6	Buses	**% OF TOTAL**	96.1%	2.4%	0.3%	0.9%	0.2%	0.0%	100.0%

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023
JOB #: SC4161
CITY: Victorville
LOCATION: DWY16 Dwy west of Amargosa Rd (The Habit Burger Grill)

AM	OUT						
TIME	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1
0:15	1	0	0	0	0	0	1
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0
1:30	2	0	0	0	0	0	2
1:45	2	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	1	0	0	1
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0
3:30	0	2	0	0	0	0	2
3:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0
4:45	2	0	0	0	0	0	2
5:00	3	0	0	0	0	0	3
5:15	2	0	0	0	0	0	2
5:30	2	0	0	0	0	0	2
5:45	1	0	0	0	0	0	1
6:00	5	0	0	0	0	0	5
6:15	1	0	0	0	0	0	1
6:30	4	0	0	0	0	0	4
6:45	2	0	0	0	0	0	2
7:00	6	0	0	0	0	0	6
7:15	2	0	0	0	0	0	2
7:30	2	0	0	0	0	0	2
7:45	5	0	0	0	0	0	5
8:00	5	0	0	0	0	0	5
8:15	6	0	0	0	0	0	6
8:30	8	0	0	0	0	0	8
8:45	4	0	1	1	0	0	6
9:00	7	0	0	0	0	0	7
9:15	5	1	0	0	0	0	6
9:30	6	0	0	0	0	0	6
9:45	5	0	1	0	0	0	6
10:00	5	0	0	0	0	0	5
10:15	9	0	0	0	0	0	9
10:30	5	0	0	0	0	0	5
10:45	6	1	0	0	0	0	7
11:00	10	0	0	0	0	0	10
11:15	6	0	0	0	0	0	6
11:30	14	0	0	0	0	0	14
11:45	6	1	0	0	0	0	7
TOTAL	152	5	2	2	0	0	161

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	37

PM	OUT						
Time	1	2	3	4	5	6	TOTAL
12:00	9	0	0	0	0	0	9
12:15	13	0	0	0	0	0	13
12:30	11	0	0	0	0	0	11
12:45	14	0	0	0	0	0	14
13:00	13	3	0	0	0	0	16
13:15	6	1	0	0	0	0	7
13:30	8	0	0	0	0	0	8
13:45	9	0	0	0	0	0	9
14:00	6	0	0	1	0	0	7
14:15	15	0	0	0	0	0	15
14:30	5	0	0	1	0	0	6
14:45	7	0	0	0	0	0	7
15:00	7	0	0	0	0	0	7
15:15	7	0	0	0	0	0	7
15:30	8	0	1	0	0	0	9
15:45	7	0	0	0	0	0	7
16:00	4	0	0	0	0	0	4
16:15	5	1	0	0	0	0	6
16:30	7	0	0	0	1	0	8
16:45	7	0	0	0	0	0	7
17:00	6	0	0	0	0	0	6
17:15	5	0	0	0	0	0	5
17:30	7	0	0	0	0	0	7
17:45	9	0	0	0	0	0	9
18:00	12	0	0	0	0	0	12
18:15	4	0	0	0	0	0	4
18:30	5	0	0	0	0	0	5
18:45	6	0	0	0	0	0	6
19:00	6	0	0	0	0	0	6
19:15	6	0	0	0	0	0	6
19:30	9	0	0	0	0	0	9
19:45	4	0	0	0	0	0	4
20:00	4	1	0	0	0	0	5
20:15	7	0	0	0	0	0	7
20:30	9	0	0	0	0	0	9
20:45	4	0	0	0	0	0	4
21:00	2	0	0	0	0	0	2
21:15	2	0	0	0	0	0	2
21:30	3	0	0	0	0	0	3
21:45	3	0	0	0	0	0	3
22:00	5	0	0	0	0	0	5
22:15	3	0	0	0	0	0	3
22:30	5	0	0	0	0	0	5
22:45	3	0	0	0	0	0	3
23:00	1	0	0	0	0	0	1
23:15	3	0	0	0	0	0	3
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	301	6	1	2	1	0	311

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	54

TOTAL: AM+PM	453	11	3	4	1	0	472
% OF TOTAL	96.0%	2.3%	0.6%	0.8%	0.2%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A16123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, August 15, 2023 **CITY:** Victorville

JOB #: SC4161 **LOCATION:** DWY16 Dwy west of Amargosa Rd (The Habit Burger Grill)

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1
0:15	1	0	0	0	0	0	1
0:30	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	1	0	0	0	0	0	1
1:30	2	0	0	0	0	0	2
1:45	2	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0
2:30	0	0	0	1	0	0	1
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	0	2	0	0	0	0	2
3:30	0	2	0	0	0	0	2
3:45	0	0	0	0	0	0	0
4:00	1	0	0	0	0	0	1
4:15	0	0	0	0	0	0	0
4:30	2	0	0	0	0	0	2
4:45	5	0	0	0	0	0	5
5:00	4	0	0	0	0	0	4
5:15	5	0	0	1	0	0	6
5:30	3	0	0	0	0	0	3
5:45	2	0	0	0	0	0	2
6:00	7	0	0	0	0	0	7
6:15	3	0	0	0	0	0	3
6:30	7	0	0	0	0	0	7
6:45	3	0	0	0	0	0	3
7:00	10	0	0	0	0	0	10
7:15	6	0	0	0	0	0	6
7:30	12	0	0	0	0	0	12
7:45	15	0	0	0	0	0	15
8:00	12	0	0	1	0	0	13
8:15	13	1	0	1	0	0	15
8:30	20	0	0	0	0	0	20
8:45	17	1	1	1	0	0	20
9:00	13	0	0	0	0	0	13
9:15	11	1	0	0	0	0	12
9:30	14	0	0	0	0	0	14
9:45	13	0	1	0	0	0	14
10:00	7	0	0	0	0	0	7
10:15	21	0	0	0	0	0	21
10:30	13	0	0	0	0	0	13
10:45	11	2	0	0	0	0	13
11:00	11	0	0	0	0	0	11
11:15	21	0	0	0	0	0	21
11:30	26	1	0	0	0	0	27
11:45	17	2	0	0	0	0	19
TOTAL	334	12	2	5	0	0	353

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	78

PM Time	COMBINED 1	2	3	4	5	6	TOTAL
12:00	21	0	0	0	0	0	21
12:15	24	1	0	0	0	0	25
12:30	21	0	0	0	0	0	21
12:45	24	0	0	0	0	0	24
13:00	22	5	0	0	0	0	27
13:15	14	1	0	0	0	0	15
13:30	15	0	0	1	0	0	16
13:45	15	0	0	1	0	0	16
14:00	12	0	0	1	0	0	13
14:15	18	0	0	0	0	0	18
14:30	11	1	0	1	0	0	13
14:45	19	0	0	0	0	0	19
15:00	15	1	0	0	0	0	16
15:15	11	0	0	0	1	0	12
15:30	14	0	1	0	0	0	15
15:45	13	0	0	0	0	0	13
16:00	11	0	0	0	0	0	11
16:15	15	1	0	0	0	0	16
16:30	14	0	0	0	1	0	15
16:45	18	0	0	0	0	0	18
17:00	15	0	0	0	0	0	15
17:15	13	0	0	0	0	0	13
17:30	18	0	0	0	0	0	18
17:45	18	0	0	0	0	0	18
18:00	20	0	0	0	0	0	20
18:15	12	0	0	0	0	0	12
18:30	8	0	0	0	0	0	8
18:45	12	0	0	0	0	0	12
19:00	11	0	0	0	0	0	11
19:15	12	0	0	0	0	0	12
19:30	20	0	0	0	0	0	20
19:45	9	0	0	0	0	0	9
20:00	6	1	0	0	0	0	7
20:15	14	0	0	0	0	0	14
20:30	12	0	0	0	0	0	12
20:45	6	0	0	0	0	0	6
21:00	4	0	0	0	0	0	4
21:15	4	0	0	0	0	0	4
21:30	4	0	0	0	0	0	4
21:45	6	0	0	0	0	0	6
22:00	6	0	0	0	0	0	6
22:15	5	0	0	0	0	0	5
22:30	6	0	0	0	0	0	6
22:45	4	0	0	0	0	0	4
23:00	2	0	0	0	0	0	2
23:15	3	0	0	0	0	0	3
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	577	11	1	4	2	0	595

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	97

TOTAL: AM+PM	911	23	3	9	2	0	948
% OF TOTAL	96.1%	2.4%	0.3%	0.9%	0.2%	0.0%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

APPENDIX M
VMT Analysis

TECHNICAL MEMORANDUM

TO: For applicant submittal to the CITY OF HESPERIA

FROM: Po Leung, Bryan Crawford, Giancarlo Ganddini | Ganddini Group, Inc.

DATE: July 8, 2025 (Revision 2)

SUBJECT: Amargosa and Palmetto High-Cube Warehouse Project
Vehicle Miles Traveled Analysis
GGI Project No. 19522

The purpose of this memorandum is to evaluate the project's vehicle miles traveled (VMT) impact in the context of the California Environmental Quality Act (CEQA) based on the methodology and thresholds established by the City of Hesperia as the Lead Agency. We trust the findings of this analysis will aid the City of Hesperia in assessing the project.

PROJECT DESCRIPTION

The 30.52-acre project site is located on the northwest corner of Amargosa Road and Palmetto Way in the City of Hesperia, California. The currently vacant site is proposed to be developed with a 499,714 square foot high-cube fulfillment center warehouse building. The project site is proposed to provide three access driveways on Palmetto Way. All three project driveways are proposed to be full access. The project west driveway will be truck only. The project central driveway and project east driveway will provide access for both auto and trucks. The site plan is provided in Attachment A.

PROJECT TRIP GENERATION

For informational purposes, the project trip generation estimate is provided in Attachment B as documented in the *Amargosa and Palmetto High-Cube Warehouse Revised Traffic Impact Analysis* (Ganddini Group, February 28 2025). As shown in Attachment B, the proposed project is forecast to generate 905 daily trips, including 74 trips during the AM peak hour and 77 trips during the PM peak hour. As also shown in Attachment B, the proposed project is forecast to generate 1,083 daily Passenger Car Equivalent (PCE) trips, including 90 PCE trips during the AM peak hour and 81 PCE trips during the PM peak hour.

VMT BACKGROUND

California Senate Bill 743 (SB 743) directs the State Office of Planning and Research (OPR) to amend the California Environmental Quality Act (CEQA) Guidelines for evaluating transportation impacts to provide alternatives to Level of Service that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." In December 2018, the California Natural Resources Agency certified and adopted the updated CEQA Guidelines package. The amended CEQA Guidelines, specifically Section 15064.3, recommend the use of Vehicle Miles Travelled (VMT) as the primary metric for the evaluation of transportation impacts associated with land use and transportation projects. In general terms, VMT quantifies the amount and distance of automobile travel attributable to a project or region. All agencies and projects State-wide are required to utilize the updated CEQA guidelines recommending use of VMT for evaluating transportation impacts as of July 1, 2020.

The updated CEQA Guidelines allow for lead agency discretion in establishing methodologies and thresholds provided there is substantial evidence to demonstrate that the established procedures promote the intended goals of the legislation. Where quantitative models or methods are unavailable, Section 15064.3 allows agencies to assess VMT qualitatively using factors such as availability of transit and proximity to other destinations. The Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) ["OPR Technical Advisory"] provides technical considerations regarding methodologies and thresholds with a focus on office, residential, and retail developments as these projects tend to have the greatest influence on VMT.

Based on guidance from the OPR Technical Advisory, the City of Hesperia adopted the *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS)* (July 2020) ["TIA Guidelines"], which establishes the City approved methodologies and thresholds.

SCREENING ASSESSMENT

The City TIA Guidelines identify screening criteria for certain types of projects that typically reduce VMT and may be presumed to result in a less than significant VMT impact. To qualify for VMT screening, the project need only satisfy one of the following screening criteria:

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

Based on initial review, the project does not satisfy any of the screening criteria; therefore, further analysis for non-screened development is warranted in accordance with the City's TIA Guidelines.

METHODOLOGY

The following section documents the analytical methodology and thresholds of significance as specified in the City TIA Guidelines.

VMT Assessment for Non-Screened Development

The project-generated VMT and project effect on VMT are calculated using San Bernardino Transportation Analysis Model (SBTAM) for the following scenarios:

- Baseline Conditions: This scenario reflects the existing SBTAM base year model.
- Baseline Plus Project: This scenario reflects the existing SBTAM base year model run with the addition of project socio-economic data (SED) to the project traffic analysis zone (TAZ).
- Cumulative No Project: This scenario reflects the existing SBTAM future year model (2050).
- Cumulative Plus Project: This scenario reflects a new SBTAM future year model run with the addition of project SED to the TAZ.

Vehicle Types

As noted in the OPR Technical Advisory, the California Code of Regulations Section 15064.3, subdivision (a), states, *"For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars*

and light trucks." Accordingly, VMT calculations presented in this analysis refer to auto VMT, except for link-level VMT calculations which includes all vehicles.

Thresholds of Significance

Project-Generated VMT

A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

- The baseline project-generated VMT per service population exceeds the San Bernardino County regional average baseline VMT per service population; or
- The cumulative project-generated VMT per service population exceeds the San Bernardino County regional average baseline VMT per service population.

Project Effect on VMT

The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

- The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition; or
- The cumulative link-level boundary (County of San Berardino) VMT per service population increases under the plus project condition compared to the no project condition.

The cumulative no project reflects the adopted Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Accordingly, cumulative impacts shall be considered less than significant if a project is consistent with the RTP/SCS, absent substantial evidence to the contrary.

NEED FOR CUMULATIVE VMT IMPACTS EVALUATION

As specified in the City TIA Guidelines, cumulative impacts shall be considered less than significant if a project is consistent with the RTP/SCS, absent substantial evidence to the contrary.

The project is located within the Southern California Association of Governments (SCAG) Metropolitan Planning Organization (MPO). SCAG is the MPO responsible for development of Connect SoCal 2024, the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the region. Through the local input process, SCAG solicited input from all 197 local jurisdictions, including the City of Hesperia, regarding current land use, socio-economic projections, sustainability and transit measures to develop the Connect SoCal plan and growth projections through the horizon year 2050. The information collected and used in development of the SCAG's long-range plans and environmental goals is documented in Data/Map Books for each jurisdiction.

Based on review of the Data/Map Book for the City of Hesperia, the project site is zoned for commercial retail use per SCAG's land use codes. Since the project proposes a GPA from Regional Commercial (RC) to Com/Ind Business Park (CIBP), evaluation of potential cumulative VMT impacts was determined to be necessary.

PROJECT-GENERATED VMT

In accordance with the City TIA Guidelines, project-generated VMT was calculated using SBTAM+ (version 3.2). The SBTAM model is a trip-based travel demand model developed and maintained by the San Bernardino County Transit Authority (SBCTA). The model analyzes a complex system of inputs such as highway networks, socio-economic data (SED), driver behavior, and goods movement to forecast travel patterns as the region grows and changes. The SBTAM model covers the entire SCAG region, but the model data is more refined and focused within San Bernardino County as opposed to other areas of the region.

To evaluate project VMT within SBTAM, the project land use must be converted into socio-economic data (SED). Table 1 below shows the project's employment estimate based on employment factors obtained from the Southern California Association of Governments (SCAG) *Employment Density Study Summary Report* (October 31, 2001).

Table 1
Employment Estimates

Employment Density Factors	
Land Use	Employment Density Factor
Warehouse	1,195 SF per Employee

SBTAM SED Inputs		
Land Use	SF[1]	Employees
Proposed Project		
Warehouse	499,714	418

Source: SCAG Employment Density Study Summary Report (October 31, 2001)

Notes:
1. SF = Square Feet

To isolate project-generated VMT, the existing SED data within the project site's TAZ 53908201 was moved to a neighboring TAZ 53918203 with existing residential and employment-based land uses (TAZ 53918203). Based on the employment density factors shown in Table 1, the project SED (418 employees) was added to the project TAZ 53908201. Table 2 shows the daily VMT estimates for the project TAZ.

Table 2
Daily VMT Estimates for Project TAZ

Scenario	TAZ 53908201		
	VMT	EMP	VMT per SP
Baseline (2019)	19,944	418	47.7
Cumulative (2050)	20,267	418	48.5

Source: SBTAM+, Baseline (2019) and Cumulative (2050) models.
Notes:
1. VMT = Vehicle Miled Traveled (auto only); EMP = Employment; SP = Service Population (Population + Employment)
2. Cumulative VMT is post-processed.

It is noted that raw SBTAM outputs for the cumulative scenario appeared to result in unreasonable VMT estimates in relation to the baseline scenario and the general trend for VMT per service population to decrease over time in developing areas such as the City of Hesperia. Therefore, the cumulative VMT estimate shown in Table 2 reflects post-processing adjustments based on factors derived from the production-attraction matrices to provide a more reasonable forecast. The post-processed cumulative VMT scenario shown in Table 2 is generally consistent with VMT trends shown in the SBCTA VMT Screening Tool, which shows a relatively small increase in VMT per worker between the baseline 2019 and cumulative 2050 model outputs.

As specified in the City's TIA Guidelines, the threshold for project-generated VMT is based on the San Bernardino County regional average baseline VMT per service population. The numeric threshold of 32.7 VMT per service population referred to in the City's TIA Guidelines was calculated based on an earlier version of the SBTAM model that was current at the time of preparation of the guidelines. Since the project VMT was calculated based on the latest SBTAM+ model (version 3.2), an updated numerical threshold was calculated using auto VMT for the latest SBTAM+ model to provide an "apples-to-apples" comparison of the project's impact relative to the Countywide average.

Table 3 shows the Countywide daily VMT estimates for using the latest SBTAM+ model (version 3.2). As shown in Table 3, the San Bernardino County regional average baseline is equal to 35.3 VMT per service population.

Table 3
Countywide Daily VMT Estimates

Scenario	San Bernardino County			
	VMT	POP	EMP	VMT per SP
Baseline	108,581,999	2,216,665	859,874	35.3

Source: SBTAM+ (v3.2), baseline (2019) model.
Notes:
1. VMT = Vehicle Miled Traveled (auto only); POP = Population; EMP = Employment; SP = Service Population (Population + Employment)

Table 4 shows the project-generated VMT impact assessment.

Table 4
Project-Generated VMT Impact Assessment

Scenario	Project-Generated VMT Impact Assessment			
	Project VMT per SP[1]	Threshold[2]	Above/Below Threshold (%)	Significant VMT Impact?
2019 (Baseline)	47.7	35.3	+35.1%	Yes
2050 (Cumulative)	48.5	35.3	+37.4%	Yes

Notes:
1. VMT = Vehicle Miled Traveled; SP = Service Population (Population + Employment)
2. Per current SBTAM+ (v3.2).

Threshold: A project would result in a significant project-generated VMT impact if either of the following conditions are satisfied:

- The baseline project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 35.3 VMT per service population; or
- The cumulative project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 35.3 VMT per service population.

Finding: As shown in Table 4, the project-generated VMT is estimated to equal 47.7 VMT per service population for baseline conditions and 48.5 VMT per service population for cumulative conditions, both of which exceed the City-established threshold of 35.3 VMT per service population. Therefore, the project-generated VMT results in a significant impact without mitigation based on the City-established thresholds.

Project-Generated VMT Mitigation

As outlined in the City TIA Guidelines, the following choices are available to mitigate VMT impacts:

1. Modify the project's-built environment characteristics to reduce VMT generated by the project.
2. Implement Transportation Demand Management (TDM) measures to reduce VMT generated by the project.
3. Participate in a VMT fee program and/or VMT mitigation exchange/banking program (if they exist) to reduce VMT from the project or other land uses to achieve acceptable levels.

As of May 2025, the San Bernardino County Transportation Authority (SBCTA) is developing a pilot VMT Mitigation Bank; however, the program is not formally in effect and this form of mitigation is therefore infeasible. Attachment B of the City TIA Guidelines outline seven (7) measures deemed appropriate for most of the San Bernardino region/City of Hesperia based on the SBCTA Implementation Study. These measures are generally based on 2010 research from the California Air Pollution Control Officers Association (CAPCOA). The updated CAPCOA *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (2024) ["CAPCOA Handbook"] outlines a total of 39 measures aimed at reducing transportation-related greenhouse gas emissions (GHG), many of which include VMT reduction as a co-benefit. Like the findings of the SBCTA Implementation Study, few of these measures, if any, are applicable to development projects in the San Bernardino and City of Hesperia. Attachment C contains a detailed review of each measure and its relevance to the proposed project.

As outlined in Attachment C, none of the available measures are expected to result in any appreciable level of VMT reduction. The primary constraints include the nature of the proposed warehousing use, which limits the ability to provide a mix of on-site land uses, and limited infrastructure for alternative modes of transportation in the project vicinity. Notwithstanding the above, Mitigation Measure 1 consists of TDM measures that can be implemented at the project/site level and would theoretically help reduce the project's VMT impact as the region develops:

Mitigation Measure 1
The project shall implement the following TDM measures:

- Provide designated carpool/vanpool parking spaces in convenient locations to encourage employees to carpool or vanpool, which can reduce commute related VMT depending on tenant participation.
- Provide end-of-trip facilities, such as bicycle parking, lockers, and similar amenities, to encourage employees to use alternative modes of transportation and reduce VMT.
- Provide commute trip reduction marketing that promotes and educates employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking. Marketing should be placed in a prominent location like a breakroom or near an entrance where all employees report.

Due to the noted constraints and site context, implementation of the TDM measures outlined Mitigation Measure 1 is expected to have a marginal effect on VMT reduction, if any. No quantifiable VMT reduction is assumed. Therefore, the project-generated VMT impact would remain significant and unavoidable.

PROJECT EFFECT ON VMT

The project's effect on VMT was also evaluated using the current SBTAM+ model. Table 5 summarizes the link-level boundary VMT per service population within the County boundary for without and with project conditions.

Table 5
Project Effect VMT Impact Assessment

Scenario	Link-Level VMT Impact Assessment				
	Countywide Link-Level VMT	POP	EMP	Link-Level VMT per SP	Significant Project Effect on VMT?
Baseline (2019) Without Project	67,280,657	2,217,168	859,874	21.9	No
Baseline (2019) With Project	67,311,167	2,217,168	860,292	21.9	
Cumulative (2050) Without Project	94,743,867	2,622,252	1,144,751	25.2	No
Cumulative (2050) With Project	94,754,786	2,622,252	1,145,169	25.2	

Source: SBTAM+ (v3.2), Baseline (2019) and Cumulative (2050) models.
Notes:
1. VMT = Vehicle Miled Traveled; POP = Population; EMP = Employment; SP = Service Population (Population + Employment)
2. All SED in the Project TAZ (53908201) from the Cumulative Without Project was moved to a neighboring zone for Cumulative With Project conditions. Therefore, since the portion of retail growth within the Project TAZ that would be displaced by the proposed project is still included, Cumulative With Project link-level VMT is overestimated, resulting in a conservative analysis.

Threshold: The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:

- The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition; or
- The cumulative link-level boundary (County of San Berardino) VMT per service population increases under the plus project condition compared to the no project condition.

Finding: As shown in Table 5, the link-level VMT per service population within the County boundary is forecast to remain at 21.9 VMT per service population for baseline plus project conditions and 25.2 VMT per service population for cumulative plus project conditions compared to the no project conditions. Therefore, the project effect on VMT is less than significant without mitigation based on the City-established thresholds.

CONCLUSIONS

The project-generated VMT is estimated to equal 47.7 VMT per service population for baseline conditions and 48.5 VMT per service population for cumulative conditions, both of which exceed the City-established threshold of 35.3 VMT per service population. Therefore, the project-generated VMT results in a significant impact without mitigation based on the City-established thresholds.

Mitigation Measure 1 consists of TDM measures that can be implemented at the project/site level and would theoretically help reduce the project's VMT impact as the region develops:

Mitigation Measure 1
The project shall implement the following TDM measures:

- Provide designated carpool/vanpool parking spaces in convenient locations to encourage employees to carpool or vanpool, which can reduce commute related VMT depending on tenant participation.
- Provide end-of-trip facilities, such as bicycle parking, lockers, and similar amenities, to encourage employees to use alternative modes of transportation and reduce VMT.
- Provide commute trip reduction marketing that promotes and educates employees about their travel choices to the employment location beyond driving such as carpooling, taking transit, walking, and biking. Marketing should be placed in a prominent location like a breakroom or near an entrance where all employees report.

Due to the noted constraints and site context, implementation of the TDM measures outlined Mitigation Measure 1 is expected to have a marginal effect on VMT reduction, if any. No quantifiable VMT reduction is assumed. Therefore, the project-generated VMT impact would remain significant and unavoidable.

The link-level VMT per service population within the County boundary is forecast to remain at 21.9 VMT per service population for baseline plus project conditions and 25.2 VMT per service population for cumulative plus project conditions compared to the no project conditions. Therefore, the project effect on VMT is less than significant without mitigation based on the City-established thresholds.

We appreciate the opportunity to assist you with this project. Please contact us at (714) 795-3100 if we can be of further assistance.

ATTACHMENT A

SITE PLAN

ATTACHMENT B

PROJECT TRIP GENERATION
EXCERPT FROM TRAFFIC IMPACT ANALYSIS

Table 2
Project Trip Generation

Land Use: High-Cube Fulfillment Center Warehouse (Non-Sort)
Size: 499.714 TSF

TRIP GENERATION RATES PER TSF[1]								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	Source[2]	In	Out	Rate	In	Out	Rate	Daily Rate
All Vehicles	ITE 155	81%	19%	0.150	39%	61%	0.160	1.810
Trucks Only	ITE 155	50%	50%	0.020	46%	54%	0.010	0.230
Passenger Car (86.7% AM, 93.8% PM, 87.3% Daily)		0.105	0.025	0.130	0.059	0.092	0.151	1.580
Truck (13.3% AM, 6.3% PM, 12.7% Daily)		0.010	0.010	0.020	0.005	0.005	0.010	0.230
Truck Mix:	SCAQMD							
2-Axle Trucks (16.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.038
3-Axle Trucks (20.7%)		0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+ Axle Trucks (62.6%)		0.006	0.006	0.012	0.003	0.003	0.006	0.144

VEHICLE TRIPS GENERATED							
	AM Peak Hour			PM Peak Hour			
Vehicle Type	In	Out	Total	In	Out	Total	Daily
Passenger Car	52	12	64	29	46	75	790
Trucks							
2-Axle Trucks	1	1	2	0	0	0	19
3-Axle Trucks	1	1	2	0	0	0	24
4+ Axle Trucks	3	3	6	1	1	2	72
Subtotal	5	5	10	1	1	2	115
Total Vehicle Trips Generated	**57**	**17**	**74**	**30**	**47**	**77**	**905**

PCE[3] TRIPS GENERATED								
		AM Peak Hour			PM Peak Hour			
Vehicle Type	PCE Factor[4]	In	Out	Total	In	Out	Total	Daily
Passenger Car	1.0	52	12	64	29	46	75	790
Trucks								
2-Axle Trucks	1.5	2	2	4	0	0	0	29
3-Axle Trucks	2.0	2	2	4	0	0	0	48
4+ Axle Trucks	3.0	9	9	18	3	3	6	216
Subtotal		13	13	26	3	3	6	293
Total PCE Trips Generated		**65**	**25**	**90**	**32**	**49**	**81**	**1,083**

Notes:
(1) TSF = Thousand Square Feet

(2) ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, 2021); ### = ITE Land Use Code.
SCAQMD = South Coast Air Quality Management District recommendations for non-cold storage high-cube warehouse.

(3) PCE = Passenger Car Equivalent

(4) Source: San Bernardino County Congestion Management Program (2016), Appendix B.

Comment Letters

Mojave Desert Air Quality Management District
Brad Poiriez, *Executive Director*
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 • Fax 760.245.2022
www.MDAQMD.ca.gov • @MDAQMD

October 1, 2025

Edgar Gonzales, Assistant Planner
City of Hesperia, Planning Department
9700 Seventh Avenue
Hesperia, CA 92345

Project: Amargosa Palmetto Industrial Warehouse

Dear Mr. Gonzales:

The Mojave Desert Air Quality Management District (District) has reviewed the Project Notice for the Main Street Commercial Project. The project proposes to construct a 499,714-square-foot industrial warehouse and distribution center on approximately 30.52 acres in the City of Hesperia. The facility would include approximately 10,000 square feet of office space and 489,714 square feet of warehouse/distribution space, along with 72 loading docks, 256 tractor-trailer stalls, 251 passenger vehicle parking spaces, stormwater facilities, sidewalks, and landscaping. The Project site consists of three parcels (APNs: 0405-072-52, 53, and 55) located south of Avenal Street, north of Palmetto Way, and west of Amargosa Road.

We have reviewed the project as proposed and based on the information available to us at this time, the District agrees with the findings of the initial study the project will not result in a significant impact to ambient air quality. The MDAQMD will require that the owner/operator obtain a Dust Control Plan (DCP) for the planned project. The most current Dust Control Plan Requirements and Dust Control Plan Submission Form are available at https://www.mdaqmd.ca.gov/permitting/compliance-forms.

Other District requirements include:

- Signage compliant with Rule 403 Attachment B shall be erected at each project site entrance not later than the commencement of construction.

- Use a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes to minimize visible fugitive dust emissions. For projects with exposed sand or fines deposits (and for projects that expose such soils through earthmoving), chemical stabilization or covering with a stabilizing layer of gravel will be required to eliminate visible dust/sand from sand/fines deposits.

- All perimeter fencing shall be wind fencing or the equivalent, to a minimum of four feet of height or the top of all perimeter fencing. The owner/operator shall maintain the wind fencing as needed to keep it intact and remove windblown dropout. This wind fencing

requirement may be superseded by local ordinance, rule or project-specific biological mitigation prohibiting wind fencing.

- All maintenance and access vehicular roads and parking areas shall be stabilized with chemical, gravel or asphaltic pavement sufficient to eliminate visible fugitive dust from vehicular travel and wind erosion. Take actions to prevent project-related trackout onto paved surfaces, and clean any project-related trackout within 24 hours. All other earthen surfaces within the project area shall be stabilized by natural or irrigated vegetation, compaction, chemical or other means sufficient to prohibit visible fugitive dust from wind erosion.

- Obtain District permits for any miscellaneous process equipment that may not be exempt under District Rule 219 including, but not limited to: Internal Combustion Engines with a manufacture's maximum continuous rating greater than or equal to 50 brake horsepower.

Comply with all applicable provisions listed in Rule 403 – *Fugitive Dust Control*

Thank you for the opportunity to review this project. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 1846, or Bertrand Gaschot at extension 4020.

Sincerely,

Chris Anderson
Planning and Air Monitoring Supervisor

CA/bg Hesperia Amargosa Pametto Industrial Warehouse 2025 30 Sep

September 29, 2025

Edgar Gonzales, Senior Planner
City of Hesperia
Attention: Edgar Gonzales
egonzalez@hesperiaca.gov

Regarding: Rachamin 5 LLC

Dear Edgar,

The Mojave Water Agency has reviewed the attached project and has determined that the Agency does not currently have facilities or infrastructure within the area based on the information submitted. If any of the information is incomplete, please notify MWA as soon as possible so that we can provide additional information regarding your request

Sincerely,
Christy Huiner
Senior Water Resource Analyst
Engineering Department
Mojave Water Agency
chuiner@mojavewater.org
760-946-7066

ROB BONTA
Attorney General

State of California
DEPARTMENT OF JUSTICE

1300 I STREET, SUITE 125
P.O. BOX 944255
SACRAMENTO, CA 94244-2550

E-Mail: EJ@doj.ca.gov

September 29, 2025

Edgar Gonzalez, Senior Planner
City of Hesperia
9700 Seventh Avenue
Hesperia, CA 02345

RE: Amargosa Road and Palmetto Way Industrial Warehouse Building, SCH #2025090664

Dear Mr. Gonzalez:

Thank you for the opportunity to provide comments on the Notice of Preparation for the Amargosa Road and Palmetto Way Industrial Warehouse Building project. While the logistics industry is an important component of our modern economy, warehouses can bring various environmental impacts to the communities where they are located. For example, diesel trucks visiting warehouses emit nitrogen oxide (NO_x)—a primary precursor to smog formation and a significant factor in the development of respiratory problems like asthma, bronchitis, and lung irritation—and diesel particulate matter (a subset of fine particular matter that is smaller than 2.5 micrometers)—a contributor to cancer, heart disease, respiratory illnesses, and premature death.[1] Trucks and on-site loading activities can also be loud, bringing disruptive noise levels during 24/7 operation that can cause hearing damage after prolonged exposure.[2] The hundreds, and sometimes thousands, of daily truck and passenger car trips that warehouses generate can contribute to traffic jams, deterioration of road surfaces, traffic accidents, and unsafe conditions for pedestrians and bicyclists. Depending on the circumstances of an individual project, warehouses may also have other environmental impacts.

To help lead agencies avoid, analyze, and mitigate warehouses' environmental impacts, the Attorney General Office's Bureau of Environmental Justice has published a document containing best practices and mitigation measures for warehouse projects. We have attached a

[1] California Air Resources Board, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health (NOx); California Air Resources Board, Summary: Diesel Particular Matter Health Impacts, https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts; Office of Environmental Health Hazard Assessment and American Lung Association of California, Health Effects of Diesel Exhaust, https://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf (DPM).

[2] Noise Sources and Their Effects, https://www.chem.purdue.edu/chemsafety/Training/PPETrain/dblevels.htm (a diesel truck moving 40 miles per hour, 50 feet away, produces 84 decibels of sound).

copy of this document to this letter, and it is also available online.[3] We encourage you to consider the information in this document as you prepare the draft environmental impact report for this project.

Priority should be placed on avoiding land use conflicts between warehouses and sensitive receptors and on mitigating the impacts of any unavoidable land use conflicts. However, even projects located far from sensitive receptors may contribute to harmful regional air pollution, so you should consider measures to reduce emissions associated with the project to help the State meet its air quality goals. A distant warehouse may also impact sensitive receptors if trucks must pass near sensitive receptors to visit the warehouse.

The Bureau will continue to monitor proposed warehouse projects for compliance with the California Environmental Quality Act and other laws. We are available to discuss as you prepare the draft environmental impact report and consider how to guide warehouse development in your jurisdiction. Please do not hesitate to contact the Environmental Justice Bureau at ej@doj.ca.gov if you have any questions.

Sincerely,



CHRISTIE VOSBURG
Supervising Deputy Attorney General

For ROB BONTA
Attorney General

[3] https://oag.ca.gov/system/files/media/warehouse-best-practices.pdf.

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ROB BONTA
Attorney General

State of California
DEPARTMENT OF JUSTICE

Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act

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In carrying out its duty to enforce laws across California, the California Attorney General's Bureau of Environmental Justice (Bureau)[1] regularly reviews proposed warehouse projects for compliance with the California Environmental Quality Act (CEQA) and other laws. When necessary, the Bureau submits comment letters to lead agencies regarding warehouse projects, and in rare cases the Bureau has filed litigation to enforce CEQA.[2] This document builds upon the Bureau's work on warehouse projects, collecting information gained from the Bureau's review of hundreds of warehouse projects across the state.[3] It is meant to help lead agencies pursue CEQA compliance and promote environmentally-just development as they confront warehouse project proposals.[4] While CEQA analysis is necessarily project-specific, this document provides information on feasible best practices and mitigation measures, nearly all of which have been adapted from actual warehouse projects in California.

I. Background

In recent years, the proliferation of e-commerce and rising consumer expectations of rapid shipping have contributed to a boom in warehouse development.[5] California, with its ports, population centers, and transportation network, has found itself at the center of this trend. In 2020, the Ports of Los Angeles, Long Beach, and Oakland collectively accounted for over 34% of all United States international container trade.[6] The Ports of Los Angeles and Long Beach alone generate about 35,000 container truck trips every day.[7] Accordingly, the South Coast Air Basin now contains approximately 3,000 warehouses of over 100,000 square feet each, with a total warehouse capacity of approximately 700 million square feet, an increase of 20 percent over the last five years.[8] This trend has only accelerated, with e-commerce growing to

[1] https://oag.ca.gov/environment/justice.
[2] https://oag.ca.gov/environment/ceqa; *People of the State of California v. City of Fontana* (Super. Ct. San Bernardino County, No. CIVSB2121829); *South Central Neighbors United et al. v. City of Fresno et al.* (Super. Ct. Fresno County, No. 18CECG00690).
[3] This September 2022 version revises and replaces the prior March 2021 version of this document.
[4] Anyone reviewing this document to determine CEQA compliance responsibilities should consult their own attorney for legal advice.
[5] As used in this document, "warehouse" or "logistics facility" is defined as a facility consisting of one or more buildings that stores cargo, goods, or products on a short- or long-term basis for later distribution to businesses and/or retail customers.
[6] Data from the Bureau of Transportation Statistics, Container TEUs (Twenty-foot Equivalent Units) (2020), https://data.bts.gov/stories/s/Container-TEU/x3fb-aeda/ (Ports of Los Angeles, Long Beach, and Oakland combined for 14.157 million TEUs, 34% of 41.24 million TEUs total nationwide) (last accessed September 18, 2022).
[7] U.S. Dept. of Transportation, Federal Highway Administration, *FHWA Operations Support – Port Peak Pricing Program Evaluation* (2020), available at https://ops.fhwa.dot.gov/publications/fhwahop09014/sect2.htm (last accessed September 18, 2022).
[8] South Coast Air Qual. Mgmt. Dist., *Final Socioeconomic Assessment for Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305*, at 7-8, 41 (May 2021).

13% of all retail sales and 2021 being a second consecutive record year for new warehouse space leased.[9] The latest data and forecasts predict that the next wave of warehouse development will be in the Central Valley.[10]

When done properly, these activities can contribute to the economy and consumer welfare. However, imprudent warehouse development can harm local communities and the environment. Among other pollutants, diesel trucks visiting warehouses emit nitrogen oxide (NO_x)—a primary precursor to smog formation and a significant factor in the development of respiratory problems like asthma, bronchitis, and lung irritation—and diesel particulate matter (a subset of fine particular matter that is smaller than 2.5 micrometers)—a contributor to cancer, heart disease, respiratory illnesses, and premature death.[11] Trucks and on-site loading activities can also be loud, bringing disruptive noise levels during 24/7 operation that can cause hearing damage after prolonged exposure.[12] The hundreds, and sometimes thousands, of daily truck and passenger car trips that warehouses generate contribute to traffic jams, deterioration of road surfaces, and traffic accidents.

These environmental impacts also tend to be concentrated in neighborhoods already suffering from disproportionate health impacts and systemic vulnerability. For example, a comprehensive study by the South Coast Air Quality Management District found that communities located near large warehouses scored far higher on California's environmental justice screening tool, which measures overall pollution and demographic vulnerability.[13] That

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[9] U.S. Census Bureau News, Quarterly Retail E-Commerce Sales 4th Quarter 2021 (February 22, 2022), https://www.census.gov/retail/mrts/www/data/pdf/ec_current.pdf (last accessed September 18, 2022); CBRE Research, *2022 North America Industrial Big Box Report: Review and Outlook*, at 2-3 (March 2022), *available at* https://www.cbre.com/insights/reports/2022-north-america-industrial-big-box#download-report (last accessed September 18, 2022).

[10] CBRE Research, *supra note* 9, at 4, 36; New York Times, *Warehouses Are Headed to the Central Valley, Too* (Jul. 22, 2020), *available* at https://www.nytimes.com/2020/07/22/us/coronavirus-ca-warehouse-workers.html.

[11] California Air Resources Board, Nitrogen Dioxide & Health, https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health (last accessed September 18, 2022) (NOx); California Air Resources Board, Summary: Diesel Particular Matter Health Impacts, https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts (last accessed September 18, 2022); Office of Environmental Health Hazard Assessment and American Lung Association of California, Health Effects of Diesel Exhaust, https://oehha.ca.gov/media/downloads/calenviroscreen/indicators/diesel4-02.pdf (last accessed September 18, 2022) (DPM).

[12] Noise Sources and Their Effects, https://www.chem.purdue.edu/chemsafety/Training/PPETrain/dblevels.htm (last accessed September 18, 2022) (a diesel truck moving 40 miles per hour, 50 feet away, produces 84 decibels of sound).

[13] South Coast Air Quality Management District, "Final Socioeconomic Assessment for Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305" (May 2021), at 4-5.

study concluded that, compared to the South Coast Air Basin averages, communities in the South Coast Air Basin near large warehouses had a substantially higher proportion of people of color; were exposed to more diesel particulate matter; had higher rates of asthma, cardiovascular disease, and low birth weights; and had higher poverty and unemployment rates.[14] Each area has its own unique history, but many of these impacts and vulnerabilities reflect historic redlining practices in these communities, which devalued land and concentrated poverty, racial outgroups, and pollution into designated areas.[15]

II. Proactive Planning: General Plans, Local Ordinances, and Good Neighbor Policies

To systematically guide warehouse development, we encourage local governing bodies to proactively plan for logistics projects in their jurisdictions. Proactive planning allows jurisdictions to prevent land use conflicts before they materialize and direct sustainable development. Benefits also include providing a predictable business environment, protecting residents from environmental harm, and setting consistent expectations jurisdiction-wide.

Proactive planning can take many forms. Land use designation and zoning decisions should channel development into appropriate areas. For example, establishing industrial districts near major highway and rail corridors but away from sensitive receptors[16] can help attract investment while avoiding conflicts between warehouse facilities and residential communities. Transition zones with lighter industrial and commercial land uses may also help minimize conflicts between residential and industrial uses.

In addition, general plan policies, local ordinances, and good neighbor policies should set minimum standards for logistics projects. General plan policies can be incorporated into existing economic development, land use, circulation, or other related general plan elements. Many jurisdictions alternatively choose to consolidate policies in a separate environmental justice element. Adopting general plan policies to guide warehouse development may also help

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[14] *Id*. at 5-7.

[15] Beginning in the 1930s, federal housing policy directed investment away from Black, immigrant, and working-class communities by color-coding neighborhoods according to the purported "riskiness" of loaning to their residents. In California cities where such "redlining" maps were drawn, nearly all of the communities where warehouses are now concentrated were formerly coded "red," signifying the least desirable areas where investment was to be avoided. *See* University of Richmond Digital Scholarship Lab, Mapping Inequality, https://dsl.richmond.edu/panorama/redlining/#loc=12/33.748/-118.272&city=los-angeles-ca (Los Angeles), https://dsl.richmond.edu/panorama/redlining/#loc=13/32.685/-117.132&city=san-diego-ca (San Diego), https://dsl.richmond.edu/panorama/redlining/#loc=11/37.81/-122.38&city=oakland-ca (Oakland), https://dsl.richmond.edu/panorama/redlining/#loc=13/37.956/-121.326&city=stockton-ca (Stockton), https://dsl.richmond.edu/panorama/redlining/#loc=12/36.751/-119.86&city=fresno-ca (Fresno) (all last accessed September 18, 2022).

[16] In this document, "sensitive receptors" refers to residences, schools, public recreation facilities, health care facilities, places of worship, daycare facilities, community centers, or incarceration facilities.

jurisdictions comply with their obligations under SB 1000, which requires local government general plans to identify objectives and policies to reduce health risks in disadvantaged communities, promote civil engagement in the public decision making process, and prioritize improvements and programs that address the needs of disadvantaged communities.[17]

Local ordinances and good neighbor policies that set development standards for all warehouses in the jurisdiction are a critical and increasingly common tool that serve several goals. When well-designed, these ordinances direct investment to local improvements, provide predictability for developers, conserve government resources by streamlining project review processes, and reduce the environmental impacts of industrial development. While many jurisdictions have adopted warehouse-specific development standards, an ordinance in the City of Fontana provides an example to review and build upon.[18] Good neighbor policies in Riverside County and by the Western Riverside Council of Government include additional measures worth consideration.[19]

The Bureau encourages jurisdictions to adopt their own local ordinances that combine the strongest policies from those models with measures discussed in the remainder of this document.

III. Community Engagement

Early and consistent community engagement is central to establishing good relationships between communities, lead agencies, and warehouse developers and tenants. Robust community engagement can give lead agencies access to community residents' on-the-ground knowledge and information about their concerns, build community support for projects, and develop creative solutions to ensure new logistics facilities are mutually beneficial. Examples of best practices for community engagement include:

- Holding a series of community meetings at times and locations convenient to members of the affected community and incorporating suggestions into the project design.
- Posting information in hard copy in public gathering spaces and on a website about the project. The information should include a complete, accurate project description, maps and drawings of the project design, and information about how the public can provide input and be involved in the project approval process. The

[17] For more information about SB 1000, *see* https://oag.ca.gov/environment/sb1000.
[18] https://oag.ca.gov/system/files/attachments/press-docs/Final%20Signed%20Fontana%20Ordinance.pdf (last accessed September 18, 2022).
[19] For example, the Riverside County policy requires community benefits agreements and supplemental funding contributions toward additional pollution offsets, and the Western Riverside Council of Governments policy sets a minimum buffer zone of 300 meters between warehouses and sensitive receptors. https://www.rivcocob.org/wp-content/uploads/2020/01/Good-Neighbor-Policy-F-3-Final-Adopted.pdf (last accessed September 18, 2022) (Riverside County); http://www.wrcog.cog.ca.us/DocumentCenter/View/318/Good-Neighbor-Guidelines-for-Siting-Warehouse-Distribution-Facilities-PDF?bidId= (last accessed September 18, 2022) (Western Riverside Council of Governments).

information should be in a format that is easy to navigate and understand for members of the affected community.

- Providing notice by mail to residents and schools within a certain radius of the project and along transportation corridors to be used by vehicles visiting the project, and by posting a prominent sign on the project site. The notice should include a brief project description and directions for accessing complete information about the project and for providing input on the project.
- Providing translation or interpretation in residents' native language, where appropriate.
- For public meetings broadcast online or otherwise held remotely, providing for access and public comment by telephone and supplying instructions for access and public comment with ample lead time prior to the meeting.
- Partnering with local community-based organizations to solicit feedback, leverage local networks, co-host meetings, and build support.
- Considering adoption of a community benefits agreement, negotiated with input from affected residents and businesses, by which the developer provides benefits to the affected community.
- Creating a community advisory board made up of local residents to review and provide feedback on project proposals in early planning stages.
- Identifying a person to act as a community liaison concerning on-site construction activity and operations, and providing contact information for the community liaison to the surrounding community.
- Requiring signage in public view at warehouse facilities with contact information for a local designated representative for the facility operator who can receive community complaints, and requiring any complaints to be answered by the facility operator within 48 hours of receipt.

IV. Warehouse Siting and Design Considerations

The most important consideration when planning a logistics facility is its location. Warehouses located in residential neighborhoods or near sensitive receptors expose community residents and those using or visiting sensitive receptor sites to the air pollution, noise, traffic, and other environmental impacts they generate. Therefore, placing facilities away from sensitive receptors significantly reduces their environmental and quality of life harms on local communities. The suggested best practices for siting and design of warehouse facilities does not relieve lead agencies' responsibility under CEQA to conduct a project-specific analysis of the project's impacts and evaluation of feasible mitigation measures and alternatives; lead agencies' incorporation of the best practices must be part of the impact, mitigation and alternatives analyses to meet the requirements of CEQA. Examples of best practices when siting and designing warehouse facilities include:

- Per California Air Resources Board (CARB) guidance, siting warehouse facilities so that their property lines are at least 1,000 feet from the property lines of the nearest sensitive receptors.[20]
- Providing adequate amounts of on-site parking to prevent trucks and other vehicles from parking or idling on public streets and to reduce demand for off-site truck yards.
- Establishing setbacks from the property line of the nearest sensitive receptor to warehouse dock doors, loading areas, and truck drive aisles, and locating warehouse dock doors, loading areas, and truck drive aisles on the opposite side of the building from the nearest sensitive receptors—e.g., placing dock doors on the north side of the facility if sensitive receptors are near the south side of the facility.
- Placing facility entry and exit points from the public street away from sensitive receptors—e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility.
- Ensuring heavy duty trucks abide by the on-site circulation plans by constructing physical barriers to block those trucks from using areas of the project site restricted to light duty vehicles or emergency vehicles only.
- Preventing truck queuing spillover onto surrounding streets by positioning entry gates after a minimum of 140 feet of space for queuing, and increasing the distance by 70 feet for every 20 loading docks beyond 50 docks.
- Locating facility entry and exit points on streets of higher commercial classification that are designed to accommodate heavy duty truck usage.
- Screening the warehouse site perimeter and onsite areas with significant truck traffic (e.g., dock doors and drive aisles) by creating physical, structural, and/or vegetative buffers that prevent or substantially reduce pollutant and noise dispersion from the facility to sensitive receptors.
- Planting exclusively 36-inch box evergreen trees to ensure faster maturity and four-season foliage.
- Requiring all property owners and successors in interest to maintain onsite trees and vegetation for the duration of ownership, including replacing any dead or unhealthy trees and vegetation.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Including signs and drive aisle pavement markings that clearly identify onsite circulation patterns to minimize unnecessary onsite vehicle travel.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.

[20] CARB, Air Quality and Land Use Handbook: A Community Health Perspective (April 2005), at ES-1. CARB staff has released draft updates to this siting and design guidance which suggests a greater distance may be warranted in some scenarios. CARB, Concept Paper for the Freight Handbook (December 2019), *available at* https://ww2.arb.ca.gov/sites/default/files/2020-03/2019.12.12%20-%20Concept%20Paper%20for%20the%20Freight%20Handbook_1.pdf (last accessed September 18, 2022).

V. Air Quality and Greenhouse Gas Emissions Analysis and Mitigation

Emissions of air pollutants and greenhouse gases are often among the most substantial environmental impacts from new warehouse facilities. CEQA compliance demands a proper accounting of the full air quality and greenhouse gas impacts of logistics facilities and adoption of all feasible mitigation of significant impacts. Although efforts by CARB and other authorities to regulate the heavy-duty truck and off-road diesel fleets have made excellent progress in reducing the air quality impacts of logistics facilities, the opportunity remains for local jurisdictions to further mitigate these impacts at the project level. Lead agencies and developers should also consider designing projects with their long-term viability in mind. Constructing the necessary infrastructure to prepare for the zero-emission future of goods movement not only reduces a facility's emissions and local impact now, but it can also save money as demand for zero-emission infrastructure grows. In planning new logistics facilities, the Bureau strongly encourages developers to consider the local, statewide, and global impacts of their projects' emissions.

Examples of best practices when studying air quality and greenhouse gas impacts include:

- Fully analyzing all reasonably foreseeable project impacts, including cumulative impacts. In general, new warehouse developments are not ministerial under CEQA because they involve public officials' personal judgment as to the wisdom or manner of carrying out the project, even when warehouses are permitted by a site's applicable zoning and/or general plan land use designation.[21]
- When analyzing cumulative impacts, thoroughly considering the project's incremental impact in combination with past, present, and reasonably foreseeable future projects, even if the project's individual impacts alone do not exceed the applicable significance thresholds.
- Preparing a quantitative air quality study in accordance with local air district guidelines.
- Preparing a quantitative health risk assessment in accordance with California Office of Environmental Health Hazard Assessment and local air district guidelines.
- Refraining from labeling compliance with CARB or air district regulations as a mitigation measure—compliance with applicable regulations is required regardless of CEQA.
- Disclosing air pollution from the entire expected length of truck trips. CEQA requires full public disclosure of a project's anticipated truck trips, which entails calculating truck trip length based on likely truck trip destinations, rather than the distance from the facility to the edge of the air basin, local jurisdiction, or other truncated endpoint. All air pollution associated with the project must be considered, regardless of where those impacts occur.

[21] CEQA Guidelines § 15369.

- Accounting for all reasonably foreseeable greenhouse gas emissions from the project, without discounting projected emissions based on participation in California's Cap-and-Trade Program.

Examples of measures to mitigate air quality and greenhouse gas impacts from construction are below. To ensure mitigation measures are enforceable and effective, they should be imposed as permit conditions on the project where applicable.

- Requiring off-road construction equipment to be hybrid electric-diesel or zero-emission, where available, and all diesel-fueled off-road construction equipment to be equipped with CARB Tier IV-compliant engines or better, and including this requirement in applicable bid documents, purchase orders, and contracts, with successful contractors demonstrating the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- Prohibiting off-road diesel-powered equipment from being in the "on" position for more than 10 hours per day.
- Using electric-powered hand tools, forklifts, and pressure washers, and providing electrical hook ups to the power grid rather than use of diesel-fueled generators to supply their power.
- Designating an area in the construction site where electric-powered construction vehicles and equipment can charge.
- Limiting the amount of daily grading disturbance area.
- Prohibiting grading on days with an Air Quality Index forecast of greater than 100 for particulates or ozone for the project area.
- Forbidding idling of heavy equipment for more than three minutes.
- Keeping onsite and furnishing to the lead agency or other regulators upon request, all equipment maintenance records and data sheets, including design specifications and emission control tier classifications.
- Conducting an on-site inspection to verify compliance with construction mitigation and to identify other opportunities to further reduce construction impacts.
- Using paints, architectural coatings, and industrial maintenance coatings that have volatile organic compound levels of less than 10 g/L.
- Providing information on transit and ridesharing programs and services to construction employees.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations for construction employees.

Examples of measures to mitigate air quality and greenhouse gas impacts from operation include:

- Requiring all heavy-duty vehicles engaged in drayage[22] to or from the project site to be zero-emission beginning in 2030.

[22] "Drayage" refers generally to transport of cargo to or from a seaport or intermodal railyard.

- Requiring all on-site motorized operational equipment, such as forklifts and yard trucks, to be zero-emission with the necessary charging or fueling stations provided.
- Requiring tenants to use zero-emission light- and medium-duty vehicles as part of business operations.
- Forbidding trucks from idling for more than three minutes and requiring operators to turn off engines when not in use.
- Posting both interior- and exterior-facing signs, including signs directed at all dock and delivery areas, identifying idling restrictions and contact information to report violations to CARB, the local air district, and the building manager.
- Installing solar photovoltaic systems on the project site of a specified electrical generation capacity that is equal to or greater than the building's projected energy needs, including all electrical chargers.
- Designing all project building roofs to accommodate the maximum future coverage of solar panels and installing the maximum solar power generation capacity feasible.
- Constructing zero-emission truck charging/fueling stations proportional to the number of dock doors at the project.
- Running conduit to designated locations for future electric truck charging stations.
- Unless the owner of the facility records a covenant on the title of the underlying property ensuring that the property cannot be used to provide refrigerated warehouse space, constructing electric plugs for electric transport refrigeration units at every dock door and requiring truck operators with transport refrigeration units to use the electric plugs when at loading docks.
- Oversizing electrical rooms by 25 percent or providing a secondary electrical room to accommodate future expansion of electric vehicle charging capability.
- Constructing and maintaining electric light-duty vehicle charging stations proportional to the number of employee parking spaces (for example, requiring at least 10% of all employee parking spaces to be equipped with electric vehicle charging stations of at least Level 2 charging performance)
- Running conduit to an additional proportion of employee parking spaces for a future increase in the number of electric light-duty charging stations.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, air filtration systems at sensitive receptors within a certain radius of facility for the life of the project.
- Installing and maintaining, at the manufacturer's recommended maintenance intervals, an air monitoring station proximate to sensitive receptors and the facility for the life of the project, and making the resulting data publicly available in real time. While air monitoring does not mitigate the air quality or greenhouse gas impacts of a facility, it nonetheless benefits the affected community by providing information that can be used to improve air quality or avoid exposure to unhealthy air.
- Requiring all stand-by emergency generators to be powered by a non-diesel fuel.
- Requiring facility operators to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of

trucks.

- Requiring operators to establish and promote a rideshare program that discourages single-occupancy vehicle trips and provides financial incentives for alternate modes of transportation, including carpooling, public transit, and biking.
- Meeting CalGreen Tier 2 green building standards, including all provisions related to designated parking for clean air vehicles, electric vehicle charging, and bicycle parking.
- Designing to LEED green building certification standards.
- Providing meal options onsite or shuttles between the facility and nearby meal destinations.
- Posting signs at every truck exit driveway providing directional information to the truck route.
- Improving and maintaining vegetation and tree canopy for residents in and around the project area.
- Requiring that every tenant train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB-approved courses. Also require facility operators to maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon request.
- Requiring tenants to enroll in the United States Environmental Protection Agency's SmartWay program, and requiring tenants who own, operate, or hire trucking carriers with more than 100 trucks to use carriers that are SmartWay carriers.
- Providing tenants with information on incentive programs, such as the Carl Moyer Program and Voucher Incentive Program, to upgrade their fleets.

VI. Noise Impacts Analysis and Mitigation

The noise associated with logistics facilities can be among their most intrusive impacts to nearby sensitive receptors. Various sources, such as unloading activity, diesel truck movement, and rooftop air conditioning units, can contribute substantial noise pollution. These impacts are exacerbated by logistics facilities' typical 24-hour, seven-days-per-week operation. Construction noise is often even greater than operational noise, so if a project site is near sensitive receptors, developers and lead agencies should adopt measures to reduce the noise generated by both construction and operation activities.

Examples of best practices when studying noise impacts include:

- Preparing a noise impact analysis that considers all reasonably foreseeable project noise impacts, including to nearby sensitive receptors. All reasonably foreseeable project noise impacts encompasses noise from both construction and operations, including stationary, on-site, and off-site noise sources.
- Adopting a lower significance threshold for incremental noise increases when baseline noise already exceeds total noise significance thresholds, to account for the cumulative impact of additional noise and the fact that, as noise moves up the decibel scale, each decibel increase is a progressively greater increase in sound

pressure than the last. For example, 70 dBA is ten times more sound pressure than 60 dBA.

- Disclosing and considering the significance of short-term noise levels associated with all aspects of project operation (i.e. both on-site noise generation and off-site truck noise). Considering only average noise levels may mask noise impacts sensitive receptors would consider significant—for example, the repeated but short-lived passing of individual trucks or loading activities at night.

Examples of measures to mitigate noise impacts include:

- Constructing physical, structural, or vegetative noise barriers on and/or off the project site.
- Planning and enforcing truck routes that avoid passing sensitive receptors.
- Locating or parking all stationary construction equipment as far from sensitive receptors as possible, and directing emitted noise away from sensitive receptors.
- Verifying that construction equipment has properly operating and maintained mufflers.
- Requiring all combustion-powered construction equipment to be surrounded by a noise protection barrier
- Limiting operation hours to daytime hours on weekdays.
- Paving roads where truck traffic is anticipated with low noise asphalt.
- Orienting any public address systems onsite away from sensitive receptors and setting system volume at a level not readily audible past the property line.

VII. Traffic Impacts Analysis and Mitigation

Warehouse facilities inevitably bring truck and passenger car traffic. Truck traffic can present substantial safety issues. Collisions with heavy-duty trucks are especially dangerous for passenger cars, motorcycles, bicycles, and pedestrians. These concerns can be even greater if truck traffic passes through residential areas, school zones, or other places where pedestrians are common and extra caution is warranted.

Examples of measures to mitigate traffic impacts include:

- Designing, clearly marking, and enforcing truck routes that keep trucks out of residential neighborhoods and away from other sensitive receptors.
- Installing signs in residential areas noting that truck and employee parking is prohibited.
- Requiring preparation and approval of a truck routing plan describing the facility's hours of operation, types of items to be stored, and truck routing to and from the facility to designated truck routes that avoids passing sensitive receptors. The plan should include measures for preventing truck queuing, circling, stopping, and parking on public streets, such as signage, pavement markings, and queuing analysis and enforcement. The plan should hold facility operators responsible for violations of the truck routing plan, and a revised plan should be required from any new tenant that occupies the property before a business license

is issued. The approving agency should retain discretion to determine if changes to the plan are necessary, including any additional measures to alleviate truck routing and parking issues that may arise during the life of the facility.
- Constructing new or improved transit stops, sidewalks, bicycle lanes, and crosswalks, with special attention to ensuring safe routes to schools.
- Consulting with the local public transit agency and securing increased public transit service to the project area.
- Designating areas for employee pickup and drop-off.
- Implementing traffic control and safety measures, such as speed bumps, speed limits, or new traffic signs or signals.
- Placing facility entry and exit points on major streets that do not have adjacent sensitive receptors.
- Restricting the turns trucks can make entering and exiting the facility to route trucks away from sensitive receptors.
- Constructing roadway improvements to improve traffic flow.
- Preparing a construction traffic control plan prior to grading, detailing the locations of equipment staging areas, material stockpiles, proposed road closures, and hours of construction operations, and designing the plan to minimize impacts to roads frequented by passenger cars, pedestrians, bicyclists, and other non-truck traffic.

VIII. Other Significant Environmental Impacts Analysis and Mitigation

Warehouse projects may result in significant environmental impacts to other resources, such as to aesthetics, cultural resources, energy, geology, or hazardous materials. All significant adverse environmental impacts must be evaluated, disclosed and mitigated to the extent feasible under CEQA. Examples of best practices and mitigation measures to reduce environmental impacts that do not fall under any of the above categories include:

- Appointing a compliance officer who is responsible for implementing all mitigation measures, and providing contact information for the compliance officer to the lead agency, to be updated annually.
- Creating a fund to mitigate impacts on affected residents, schools, places of worship, and other community institutions by retrofitting their property. For example, retaining a contractor to retrofit/install HVAC and/or air filtration systems, doors, dual-paned windows, and sound- and vibration-deadening insulation and curtains.
- Sweeping surrounding streets on a daily basis during construction to remove any construction-related debris and dirt.
- Directing all lighting at the facility into the interior of the site.
- Using full cut-off light shields and/or anti-glare lighting.
- Requiring submission of a property maintenance program for agency review and approval providing for the regular maintenance of all building structures, landscaping, and paved surfaces.
- Using cool pavement to reduce heat island effects.

- Planting trees in parking areas to provide at least 35% shade cover of parking areas within fifteen years to reduce heat island impacts.
- Using light colored roofing materials with a solar reflective index of 78 or greater.
- Including on-site amenities, such as a truck operator lounge with restrooms, vending machines, and air conditioning, to reduce the need for truck operators to idle or travel offsite.
- Designing skylights to provide natural light to interior worker areas.
- Installing climate control and air filtration in the warehouse facility to promote worker well-being.

IX. Conclusion

California's world-class economy, ports, and transportation network position it at the center of the e-commerce and logistics industry boom. At the same time, California is a global leader in environmental protection and environmentally just development. The guidance in this document furthers these dual strengths, ensuring that all can access the benefits of economic development. The Bureau will continue to monitor proposed projects for compliance with CEQA and other laws. Lead agencies, developers, community advocates, and other interested parties should feel free to reach out to us as they consider how to guide warehouse development in their area.

Please do not hesitate to contact the Environmental Justice Bureau at ej@doj.ca.gov if you have any questions.

10/16/2025

VIA EMAIL ONLY

Edgar Gonzalez, Senior Planner
City of Hesperia Planning Department
9700 Seventh Avenue
Hesperia, California 92345
Email: egonzalez@hesperiaca.gov

RE: NOP Comments for Amargosa Road and Palmetto Way Industrial Warehouse Building Project

Dear Mr. Gonzalez,

On behalf of Californians Allied for a Responsible Economy ("CARE CA") thank you for the opportunity to provide comments on the Notice of Preparation ("NOP") for environmental review of the Amargosa Road and Palmetto Way Industrial Warehouse Building project ("Project"). The Project includes the development of a 499,714-square-foot industrial warehouse and distribution center.

The goal of an EIR is to provide decisionmakers and the public with detailed information about the effects of a proposed project on the environment, how significant impacts will be minimized and alternatives to the project (Pub. Res. Code § 21002.2). Ideally, the discussion should include sufficient detail to allow those who do not participate in the DEIR's preparation to understand and meaningfully deliberate the issues raised by the Project. We, therefore, respectfully request a complete analysis of all identified impacts, imposition of all feasible mitigation and study of a reasonable range of alternatives.

Since the informational sufficiency of an EIR should be at the heart of its preparation, we ask the City to consider the following requests:

Air Quality & Public Health: CARE CA has a particular interest in air quality and public health. We have serious concerns about the Initial Study conclusion that air quality impacts are less than significant. This impact should be further analyzed in the DEIR. In the DEIR analysis, the City should also ensure that the estimates of the significance

of air quality impacts are consistent with current epidemiological studies regarding the effects of pollution and various kinds of environmental stress on public health. We must not ignore the unjust consequences of toxic pollution on communities.

Greenhouse Gas Emissions: In the DEIR analysis, the City should adopt quantitative thresholds that embody climate change's existential threat to humankind to determine the significance of the Project's GHG emissions.

Mitigation Measures: Finally, we encourage the City to incorporate modern technology in the mitigation measures and ensure that the measures are effective and enforceable. A Statement of Overriding Considerations should be considered only after ALL feasible mitigation measures are included in the MMRP.

Thank you for the opportunity to submit NOP comments. Again, CARE CA respectfully requests full analysis of the environmental impacts, feasible mitigation, and reasonable alternatives to the Project.

Sincerely,



Jeff Modrzejewski
Executive Director

October 16, 2025

City of Hesperia Planning Department
Attn: Edgar Gonzalez, Senior Planner
9700 Seventh Avenue
Hesperia, California 92345
Submitted via email to egonzalez@hesperiaca.gov.

Re: Amargosa Road and Palmetto Way Industrial Warehouse Building Notice of Preparation (SCH #2025090664)

Dear Edgar Gonzalez,

I am writing this letter on behalf of the Center for Community Action and Environmental Justice (CCAEJ) to respond to the Notice of Preparation for the proposed Amargosa Road and Palmetto Way Industrial Warehouse ("Project") that has been proposed for construction in the Hesperia community. After reviewing the NOP documents, there is a concern about whether the Project as proposed would meet that AB 98 separation requirements between it and the existing residences on the north side of Avenal Street. Based on the imagery in Figure 5: Site Plan (July 2025) from the IS-MND, some of the drive aisles and trailer storage yards appear to be too close to those locations. We would encourage the City to verify that the correct distances are provided and maintained.

Furthermore, it is vital for the Project to be forward-thinking and prepare for service by zero-emissions cargo handling equipment, trucks, and transportation refrigeration units, including by building conduit and other provisions for enabling charging equipment to operate as part of the initial buildout of the Project. Finally, the City needs to ensure that all street and roadway improvements meet the recommendations from Caltrans[1] for the appropriate bike infrastructure to ensure that the safest infrastructure is built from the start and that the appropriate bike parking facilities are provided. Taken together, these provisions will help reduce VMT by providing biking and other similar forms of transportation e.g. electric scooters as not just a viable alternative to driving, but by making it safer for people who undoubtedly already are using them.

[1] https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/office-of-smart-mobility-and-climate-change/planning-contextual-guidance-memo-03-11-20-a11y.pdf

Thank you for your time and consideration of these concerns. If there are any questions about these comments, please do not hesitate to reach out for clarification.

Sincerely,



Marven E. Norman
Environmental Policy Analyst

CCAEJ is a long-standing community based organization with over 40 years of experience advocating for stronger regulations through strategic campaigns and building a base of community power. Most notably, CCAEJ's founder Penny Newman won a landmark federal case against Stringfellow Construction which resulted in the 'Stringfellow Acid Pits' being declared one of the first Superfund sites in the nation. ***CCAEJ*** prioritizes community voices as we continue our grassroots efforts to bring lasting environmental justice to the Inland Valley Region.

Mailing Address
PO Box 33124
Jurupa Valley, CA 92519
www.ccaej.org

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Isaac Bojorquez
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PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Sara Dutschke
Miwok

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

COMMISSIONER
Vacant

COMMISSIONER
Vacant

ACTING EXECUTIVE SECRETARY
Michelle Carr

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

September 18, 2025

Edgar Gonzalez
City of Hesperia
Planning Department
9700 Seventh Avenue
Hesperia CA 92345

Re 2025090664 Amargosa Road and Palmetto Way Industrial Warehouse Building Project, San Bernardino County

Dear Mr. Gonzalez:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPA.PDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@NAHC.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

cc: State Clearinghouse